India has made considerable progress in sanitation since the launch of the Total Sanitation Campaign. However, concerns have been raised about its sustainability.

This document is the culmination of research and discussions on the experiences of civil society organisations implementing sustainable sanitation campaigns in six Indian states. Their initiatives indicate that a typical campaign spread over three to five years comprises four distinct phases and involves a series of activities described in this book. To be impactful, the programme must address the social, technical, financial, institutional and environmental building blocks of sustainability. Its success hinges on software and governance and most especially on behavioural change.

Complete with case studies, detailed analyses, facts, figures and investment trends from six partner organisations, this is a handy guide and template for individuals and organisations seeking to usher positive change in the challenging field of sanitation in India.
Image 1: Towards change: The journey begins with awareness

Photo courtesy: MYRADA
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ANNEXURES 54
This document is the culmination of months of deliberations on sustainable sanitation efforts implemented by leading civil society organisations over the last few decades. For Arghyam, which spearheaded the effort, the seed was sown during its Third National Conference on Strategic Grant-making in Bengaluru for donor and NGO partners in 2008. There, the participants discussed the need for a set of guidelines for development programmes in sanitation, education, health, etc. This would act as a roadmap for NGOs embarking on such projects for the first time, or donor organisations reviewing their grants, or decision-makers designing new programmes. The guidelines drawing from field experience and local specificities would be generalised to include aspects such as essential activities, time and resources required for them, baseline study templates and challenges to be anticipated.

At a consultation on sustainable sanitation a year later, Dr. Mihir Shah, Member, Planning Commission of India, highlighted the need to move beyond documenting successful models to evolving a process for sustainable sanitation intervention.

Our effort has been to combine these two ideas into a template that represents the process of sustainable sanitation as a progression through distinct phases, with activities and a range of options for each. Carried out with the support and inputs of several institutional and field partners, this has been a truly collaborative exercise, with trends jointly identified and lessons shared. Working in partnership was all the more satisfying as it is one of Arghyam’s key strategic and operational principles. We are excited by the prospect of following the same model for other key water sector topics.

We hope that this document will be useful for individuals and organisations working in the area of sanitation and have no doubt that the framework will be enriched by the experiences and inputs of the wider community.

Sunita Nadhamuni
CEO
Arghyam
Background

Civil Society Experiences

This document is the culmination of Arghyam’s research and discussions on the experiences of civil society organisations involved in implementing sustainable sanitation campaigns. The organisations, working in six states across India, were able to ensure that their campaigns remained sustainable by emphasising behavioural change and establishing long-term relationships with their communities.

On September 9, 2009, Arghyam, a Bengaluru based non-governmental donor organisation, hosted a consultation on sustainable sanitation. The session, chaired by Dr Mihir Shah, Member, Planning Commission of India, aimed to provide inputs on the midterm review of the Eleventh Five Year Plan. About 30 individuals representing 18 NGOs across the country, representatives of the Total Sanitation Campaign (TSC) of the Government of Karnataka and representatives of the gram panchayats (GPs) of Gulbarga and the Bangalore Rural district of Karnataka participated in the deliberations.

The one-day event saw the exchange of civil society sanitation experiences and highlighted the gaps in the current system. An interaction on ecological sanitation witnessed the sharing of experiences, models, benefits and challenges faced by some of the key proponents of ecosan in India. The manner in which the Government of India’s (Goi) TSC was being implemented raised several concerns and led to a discussion on the steps needed to ensure the social, technical, institutional, financial and environmental sustainability of the programme.

While recognising that this was a good start, Dr Shah proposed taking the effort forward with a set of structured recommendations for the Planning Commission. One suggestion was to draw from the experiences of organisations involved in pioneering work on sanitation to document the socio-economic, technical and institutional processes as well as the time and resources required to establish a typical sustainable sanitation campaign.

Arghyam anchored this project with knowledge inputs from WaterAid India. A template prepared in-house was circulated among Arghyam’s and...
**TABLE 1: Featured NGOs at a glance**

<table>
<thead>
<tr>
<th>Organisation</th>
<th>State</th>
<th>Programme Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dharti Gramothan Evam Shabhi</td>
<td>Madhya Pradesh</td>
<td>108 villages in 30 panchayats: 750 toilets; low water table; flood-prone area</td>
</tr>
<tr>
<td>Gramin Vikas Samiti, Morena</td>
<td>Tamil Nadu</td>
<td>157 villages: 25,000 toilets; 90% usage</td>
</tr>
<tr>
<td>Gramalaya, Tiruchirappalli</td>
<td>Tamil Nadu</td>
<td>108 villages in 21 districts: 44,697 households; 100% usage</td>
</tr>
<tr>
<td>Gram Vikas</td>
<td>Orissa</td>
<td>700 villages in 20 districts: 144 toilets; low water table</td>
</tr>
<tr>
<td>Lok Shakti Samiti</td>
<td>Chhattisgarh</td>
<td>148 villages in 80 panchayats: 3,777 toilets; low water table</td>
</tr>
<tr>
<td>MYRADA, Kamasamudram</td>
<td>Karnataka</td>
<td>25% of villages in the taluka: 10,000 toilets; 60% usage</td>
</tr>
<tr>
<td>MYKAPS, H.D. Kote</td>
<td>Karnataka</td>
<td>700 villages in 21 districts: 44,697 households; 100% usage</td>
</tr>
<tr>
<td>REAL, Dindigul</td>
<td>Tamil Nadu</td>
<td>3 coastal and drought-prone districts: Ecosan</td>
</tr>
<tr>
<td>Samarthan, Sehore</td>
<td>Madhya Pradesh</td>
<td>94 villages: 700 toilets; 85% usage; low water table</td>
</tr>
<tr>
<td>Utthan, Ahmedabad</td>
<td>Gujarat</td>
<td>4 rocky, water-scarce districts</td>
</tr>
</tbody>
</table>

The Total Sanitation Campaign has led to the mainstreaming of sanitation in India. However, social mobilisation has taken a backseat as the campaign has been driven largely by hardware targets. Consequently, there has been an increase in the coverage of toilets but their usage and sustainability remains low. To be effective, the campaign must focus on awareness creation and demand generation.

**The Sanitation Drive in India**

**The Story so Far**

The Total Sanitation Campaign (TSC) launched by the GoI in 1999, envisages a shift from an infrastructure-focused approach to one that promotes behaviour change. Among its objectives is the elimination of open defecation to minimise the risk of contaminating food and drinking water sources.

The total financial outlay under the TSC is Rs 17,885 crore of which Rs 7,369 crore has been spent on construction of toilets, Information, Education and Communication (IEC) and related activities, resulting in an increase in the number of households with toilets (sanitation coverage). Data from the Department of Drinking Water Supply (DDWS) shows that the coverage of rural sanitation increased from 22 per cent in 2001 to approximately 62 per cent in 2009 (Graph 1, Annexure 1). However, there are huge variations in performance across the country. Ten states performed far better, with the rest lagging, and Nagaland, Arunachal Pradesh, Bihar, Assam, Puducherry, Manipur, and Dadar and Nagar Haveli at the bottom of the sanitation ladder (Graph 2).

The TSC guidelines of 2007 envisaged a ‘community-led, people-centric’ programme. Considerable emphasis is placed on raising awareness and generating demand for sanitary facilities at the household, community and institutional levels. TSC implementation would be led by Panchayati Raj institutions (PRIs) at all levels. Resources were earmarked for IEC activities to fuel demand, and for Rural Sanitary Marts (RSMs) and production centres to ensure a continuous supply of hardware to meet the requirements of toilet construction.

The Nirmal Gram Puraskar (NGP) introduced by the DDWS in 2003, recognises the role of GPs and local communities in achieving a community-wide open defecation-free status and clean village environment.

WaterAid's partners in the field. The template sought to capture the processes, timelines, and human and financial resources required to plan, implement and sustain a sanitation campaign in our partners’ project areas.

**ASSUMPTIONS**

This document is based on experiences from civil society initiatives in Chhattisgarh, Gujarat, Karnataka, Madhya Pradesh, Orissa and Tamil Nadu. Representing diverse typologies, the organisations involved approach sustainable sanitation in programme rather than project mode. They place considerable emphasis on participatory processes, building relationships, allocating adequate time for behavioural change, and person-to-person campaigns.

As we will see, communities in the process of adopting sanitation campaigns require intensive and continuous support. The organisations mentioned here had a long-term engagement — a significant enabler of behavioural change — with their programme areas prior to introducing their sanitation initiatives. Having established a relationship with the community, they spent another three to six years ensuring sustainability.

It must be reiterated that the grassroots experiences and inferences presented here pertain to specific local conditions. The wide socio-economic and cultural diversity of India defies blanket solutions. Our effort has been to present lessons learned in specific regional contexts (Table 1) and highlight best practices as a guide for decision makers and other grassroots organisations.
Given the pride attached to an award conferred by the President of India, the NGP became a key driver of sanitation coverage. According to the DDWS, the number of NGPs shot up from 41 in 2005 to over 10,000 in 2008.

SLIPPIES
While adequate resources have been made available for IEC, it is evident that state and government departments have not paid enough attention to the time and processes required to bring about behavioural change. The campaign, driven largely by hardware targets, has resulted in social mobilisation taking a backseat. Consequently, there has been an increase in the coverage of toilets in rural India, but their usage, and sustainability remains low. Several studies and surveys conducted in the past point to this as a common reason for people not using toilets and resorting to slippage from toilet use to open defecation.

Slippages have also been reported in regard to NGP GPs. Classic evidence is from A Survey of Household Water and Sanitation (ASHWAS) conducted by Arghyam in 17,200 households across 172 GPs in 28 districts of Karnataka. The survey revealed that the percentage of open defecation in the 14 NGP GPs studied ranged from two to 60 per cent, a clear indicator that while toilets are present, their usage remains low (Graph 3).

Similarly there was a joint study by UNICEF and TARU in 2008 covering 7,100 households in the 162 NGP GPs in six states – Andhra Pradesh, Chhattisgarh, Maharashtra,
Tamil Nadu, Uttar Pradesh and West Bengal—37 had won the award in 2004-05 and 125 in 2005-06. The study found that only four per cent of these GPs were genuinely open defecation-free. Two-fifths of the population in 32 per cent of the NGPs surveyed still resorted to open defecation (Table 2).

The findings reveal several reasons for slippages, including poor site selection, poor or unfinished installations, absence of superstructure, lack of water, inadequate behavioural change, blockage of the pan and poor disposal of excreta. Other parts of the country present similar impressions. Image 3 illustrates the manner in which a toilet, constructed without superstructure in Orissa, remains unusable.

Another survey conducted by WaterAid across 40 GPs in 10 districts across Bihar, Chhattisgarh, Haryana, Karnataka, and Tripura in 2008, reveals other issues in TSC implementation. It shows that the TSC was becoming increasingly state-led and target driven. It also points out that “IEC activities have been implemented in a routine, administrative fashion as more of a fund utilisation exercise, not organically linked to awareness creation and demand generation processes”.

---

**TABLE 2: Open defecation in NGP GPs in six states**

<table>
<thead>
<tr>
<th>States</th>
<th>Population practicing open defecation (%)</th>
<th>Total GPs surveyed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Zero</td>
<td>&lt;20</td>
</tr>
<tr>
<td>Andhra Pradesh</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Chhattisgarh</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>6</td>
<td>36</td>
</tr>
<tr>
<td>Tamil Nadu</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>Uttar Pradesh</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>West Bengal</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>6</strong></td>
<td><strong>64</strong></td>
</tr>
<tr>
<td><strong>Total (%)</strong></td>
<td><strong>4</strong></td>
<td><strong>40</strong></td>
</tr>
</tbody>
</table>

Note: Values represent number of GPs
What is Sustainable Sanitation?

Building Blocks & Indicators

The experiences of civil society organisations indicate that a sanitation campaign must address social, technical, financial, institutional and environmental concerns to be sustainable. This chapter explains the building blocks of sustainability, and offers a list of visual indicators as well as a checklist for ascertaining the sanitation status of a village.

This document refrains from defining sustainable sanitation as numerous national and international organisations have already done so. It seeks instead to present the building blocks and indicators of sustainability (Diagram 1).

A. BUILDING BLOCKS OF SUSTAINABILITY

Sanitation is sustainable to the extent that it addresses the social, technical, financial, institutional and environmental challenges posed by local specificities. It is therefore essential that these concerns form the building blocks of the campaign. The following section discusses these blocks in greater detail.

1. Social
   • Appropriate IEC strategy: Must outline procedures and solutions for every stage of the process
   • Behavioural change: Must recognise that behaviour change takes time. If the desired change is not taking place, it is important to understand why and develop a strategy that addresses these reasons. Communities must be educated on the benefits of sanitation to their socio-economic development, health
     • Inclusive strategies: Despite the stated objective of being ‘total’, certain communities are invariably excluded when intervention strategies neglect to take socio-economic, cultural and location-specific variables into account. Genuine inclusion involves careful consideration of all these factors to address the needs of the poorest, most vulnerable populations
     • Gender sensitive: Addressing gender concerns is critical to sustainability. For instance, menstrual hygiene issues and awareness must be addressed

2. Technical
   • Appropriate and viable technology: Technology for toilets must be based on local, climatic, geo-hydrological and socio-economic conditions. Building linkages and convergence with existing drinking water supply and watershed programmes in the area is of paramount importance. Such convergence also helps leverage both human and financial resources
     • User-friendly toilets: Toilets must be designed such that the community finds them easy to use and maintain
     • Availability of water: Lack of water is a commonly cited reason for the disuse of the toilets. This may be addressed by improving the availability of water and through other appropriate technological interventions
     • Checks and balances: These must be embedded into planning (source-to-sink, integration, etc) and implementation (good quality of construction) to ensure that the effort remains sustainable
     • Solid and liquid waste management: Closing the water-waste loop i.e. reusing, recycling and other measures to ensure that sanitary waste does not contaminate water sources is critical
     • Operation and maintenance (O&M): Strategies and protocols must be put in place for O&M of toilets, and solid and liquid waste management facilities. Capacity building for O&M must be taken on simultaneously
     • Availability of hardware: A steady supply of pans, slabs and other construction materials must be available for construction. Linkages with RSMs may be established wherever possible for this purpose
3. Institutional

- Strengthening village institutions: Local communities must be strengthened, encouraged and mobilised through training, capacity building and exposure visits to adopt sanitation and hygiene practices that protect their health and wellbeing.
- Capacity and commitment: Must be present at the village, district, state and national levels. Capacity must be built at the GP or block level to plan, implement, operate and maintain sanitation systems.
- Participatory planning: Mechanisms to facilitate bottom-up planning supported by appropriate IEC, capacity building, monitoring, etc, are essential.
- Social audits: To facilitate community systems that discourage open defecation and promote the use of toilets, help ensure quality of construction, and monitor usage, water quality and the impact on public health.

4. Financial

- Affordability: Affordable and financially sustainable options for sanitation, and solid and liquid waste management must be documented and adopted on the basis of local needs.
- Convergence: The possibility of converging TSC initiatives with existing programmes such as the National Rural Drinking Water Programme (NRDWP) and the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) must be explored to ease the mobilisation of financial resources without burdening the local community.
- Subsidies: Prompt, community-friendly subsidies that are realistic and inclusive, targeted at both the above poverty line (APL) and below poverty line (BPL) categories. According to data released by the DDWS, the coverage of toilets is higher in the BPL category than in the APL category in most states. Non-subsidy based approaches with strong behavioural change components must be simultaneously supported.

5. Environmental

- Environment-friendly technologies: Technologies that are water efficient, thus limiting depletion of water sources, and ones that can prevent pollution of surface and groundwater resources must be identified and promoted. The use of too much water for flushing, for instance, depletes water sources.
- Solid and liquid waste management: Improperly disposed human waste pollutes surface and groundwater sources. Closing the sanitation loop through recycling and reuse is essential to ensure sustainability.

B. INDICATORS OF SUSTAINABILITY

Arghyam has been working with civil society groups in over 20 villages in Bundelkhand (Jhansi and Tikamgarh), Karnataka (H.D. Kote and Kasamudram), and Tamil Nadu (Tiruchirappalli)Blocks of sustainability are embedded in these projects and most importantly, sanitation is integrated with water management and governance. Our experience reveals that the progression of a village towards sustainable sanitation may be gauged through a set of reliable visual indicators.

Visual indicators

Visual impressions of a village that has achieved sustainable sanitation can be confirmed against two sets of indicators: Essential or non-negotiable, and desirable or negotiable (Table 3).

- Free from open defecation leading to pollution of water sources
- 100% coverage and usage of toilets
- Special provisions for the aged, specially abled, pregnant women
- 100% sanitation in schools (separate toilets for girls and boys)
- Water supply available for toilets
- No additional burden of fetching water for toilets on women
- Well-maintained drainage system (unclogged drains, free of stagnant water, not polluting water sources)
- 100% sanitation in schools
- High awareness of personal hygiene practices (hand-washing after defecation; handling drinking water with clean hands)
- Addresses issues of menstrual hygiene
- Availability of local capacity for O&M of sanitation system
- Capacity for biannual (indicative) water quality testing by the community, information dissemination, confirmatory tests and follow-up action
- Reduction in waterborne diseases; no deaths reported

- Water for household and school toilets available at a convenient distance, so that it does not burden women
- Treatment and reuse of grey water
- Solid waste management systems (composting, etc); solid waste not creating litter or clogging drains
- High awareness of personal hygiene practices (hand-washing after defecation; handling drinking water with clean hands)
- Addresses issues of menstrual hygiene
- Availability of local capacity for O&M of sanitation system
- Capacity for biannual (indicative) water quality testing by the community, information dissemination, confirmatory tests and follow-up action
- Reduction in waterborne diseases; no deaths reported

- Free from open defecation; school toilets in use
- Water for household and school toilets available at a convenient distance, so that it does not burden women
- Treatment and reuse of grey water
- Solid waste management systems (composting, etc); solid waste not creating litter or clogging drains
- High awareness of personal hygiene practices (hand-washing after defecation; handling drinking water with clean hands)
- Addresses issues of menstrual hygiene
- Availability of local capacity for O&M of sanitation system
- Capacity for biannual (indicative) water quality testing by the community, information dissemination, confirmatory tests and follow-up action
- Reduction in waterborne diseases; no deaths reported
The success of a sanitation campaign hinges on three critical elements – software, hardware and governance. The case studies listed here reiterate the importance of allocating adequate time and resources, both human and financial, to each of these. Different approaches to behaviour change communication are listed. Equally vital to sustainability is the choice of area specific, affordable, user-friendly technology.

A close look at the TSC reveals that three critical elements need strengthening to ensure sustainability:

- **Software**: Social mobilisation, capacity building and IEC for behavioural change
- **Hardware**: Appropriate technology, integration with water management, etc.
- **Governance**: Integrated and participatory planning, institution building and convergence

A detailed analysis is given below:

### A. SOFTWARE

This section examines civil society experiences and describes the phases as well as the time and human resource requirements of the software component of the campaign.

#### 1. Process and Time

The sanitation programmes of successful grassroots organisations recognise that IEC and social mobilisation are not a one-time effort – behavioural and attitudinal change require continuous engagement with the community. Externalities that impact demand for toilets include cultural factors as well as financial and space constraints, all of which demand continuous engagement and dialogue to overcome.

#### Stages of implementation

A sanitation campaign involves two broad stages:

- **Stage 1**: Leading the community from open defecation to the use of toilets
- **Stage 2**: A follow-up campaign to sustain usage

The duration of each stage varies according to the socio-economic and cultural conditions and state of governance in the area. The experiences of NGOs such as Gramalaya (Tamil Nadu) and MYKAPS (Karnataka), both pioneers in the field community mobilisation, show that it takes at least three years to convince...
the entire community of the benefits of using toilets. The project cycle for Gramalaya is about five years, of which at least three are spent on efforts to convince the local community to adopt sustainable sanitary practices (Box 1); for MYKAPS it is four. Self help groups (SHGs) have proven instrumental in helping to bring the local community to adopt sustainable sanitary practices. This could take six to 12 months, followed by a construction phase of one and a half to two years, followed in turn by a two to three year dedicated campaign to ensure usage and sustainability.

2. IEC
The TSC allocates 15 per cent of its total budget for IEC and social mobilisation. Its guidelines state that “IEC funding will be in the ratio of 80:20 between Government and social mobilisation costs.” One may infer from this that long-term engagement is vital to sustainability and sanitation programmes must not be unduly expedited.

Gram Vikas, on the other hand, adopts an entirely different approach (Box 2). This NGO, which works in the backward districts of Orissa, selects a village only if the entire community agrees to adopt sanitation practices. This could take six to 12 months, followed by a construction phase of one and a half to two years, followed in turn by a two to three year dedicated campaign to ensure usage and sustainability.

According to MYKAPS, an organisation that is new to the area, the programme cycle could take up to six years to obtain the desired results. MYKAPS succeeded in convincing the whole community by adopting multiple strategies including SHGs, village water and sanitation committees (VWSCs) and community-managed resource centres that were in close touch with the local community.

The organisation’s statistics reveal that intense IEC activities led to one third of the population being convinced in the first three months of intervention (see graph). Another 30 per cent was convinced following exposure visits to successful projects, indicating that interaction with toilet users helps change attitudes. The next 30 per cent starting using toilets upon observing their neighbours doing so. Convincing the remaining 10 per cent required multiple strategies, including pressure from the community.

One may infer from this that long-term engagement is vital to sustainability and sanitation programmes must not be unduly expedited.

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Source: J. Geetha 2009, personal communications, August

Source: Joe Madiath 2009, personal communications, December
the state governments and the total IEC cost, including
the start-up grant, will be limited to 15 per cent of
the total project cost. Each district is required to prepare a
detailed annual IEC action plan by February with defined
strategies to reach all sections of the community”.

However, several studies raise questions about the
efficacy of the content and delivery models as
adopted in almost every states. A WaterAid study
conducted in November, 2008, comes down heavily
on the state-driven, top-down nature of IEC activities.
It criticises the preference for posters and brochures
over individual, person-to-person contact. The study
states that “there has been little evidence to
show that conventional one-time, standalone IEC
methods used in most of the states have actually
mobilised communities into self-analysis and action
on their own”. It also points out that gaps in the IEC
campaign have led to lack of awareness about technology
options and related engineering aspects, hardware
maintenance issues, hand-washing and hygiene
awareness both at the school and community levels 1.

It is clear that far more needs to be accomplished with
the budget earmarked for IEC and social mobilisation
in terms of generating momentum, enthusiasm and
conviction. The scenario calls for continuous need-
based strategies enabled by local tipping points. IEC
must be flexible enough to enable cross-learning and
mid-course correction, as adopted by several civil
society groups.

Civil society groups adopt several approaches including
focussed group discussions, cultural media and exposure
visits to communities that have made the transition to
sustainable sanitation (Image 5). Awareness campaigns
are designed to trigger behavioural change by generating
momentum and enthusiasm.

The Community-led Total Sanitation (CLTS) approach,
for instance, aims at creating open defecation-free
communities by convincing rural populations of the
benefits of total sanitation. Its innovative ‘Walk of
Shame’ technique involves leading local communities
to collective action by engaging them in a participatory
analysis of their sanitation situation. A transect through areas of open defecation acts as a powerful deterrent
against the practice, and leads to the construction of toilets and the realisation that sanitation offers significant
benefits to health and family. CLTS contends that behavioural change at the collective level is as important for safe
sanitation as the availability of toilets (Box 3). States such as Maharashtra, Haryana, Chhattisgarh and Uttaranchal
have experimented with CLTS with much success.

**BOX 3: CLTS: The ‘Walk of Shame’ to the walk of pride**

The Community-led Total Sanitation (CLTS) approach entails involving the beneficiaries in an analysis of their
sanitation situation, the extent of open defecation and the adverse effects of faecal-oral contamination in
their community. It is a process of participatory facilitation where in the Walk of Shame is used as a powerful
tool to convey a negative image. Discussing issues related to open defecation while walking among the
faeces has been found to create a lasting impact. Although the villagers defecate in these areas every morning,
they do so without thought. Introducing a transect with outsiders and others in the village gives rise to a sense
of shame that often results in an immediate desire to change their sanitation status.

Field experiences have shown that communities construct household latrines of their own accord based on
their own capacity when they become convinced of the need for sanitation. More importantly, there is a
strong sense of ownership that encourages sustained usage. CLTS experiments have shown that a community-
driven approach does not require high subsidies; it does need a greater understanding of the individual and
collective triggers that motivate people to change their perceptions about sanitation.

The CLTS campaign is based on several paradigm shifts:
- From teaching and educating to facilitating the community’s own analysis
- From ‘we must provide toilets’ to ‘communities can do it’
- From ‘we persuade and do it’ to ‘we motivate communities to take independent decisions and action’
- From top-down standard designs to bottom-up ‘they design’ innovations
- From hardware support to people and process support

WaterAid reports that CLTS has been widespread and effective in Bhiwani, Panipat, Sirsa and other districts in
Haryana, leading to an increase in coverage from around 39 per cent to more than 70 per cent during 2006-08.

Source:
1. Anon 2007, Training of Trainers Manual on Community-driven Total Sanitation Programme,
Water and Sanitation Programme, New Delhi

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1 Indira Khurana and Romit Sen 2008, Feeling the Pulse: A Study of the Total Sanitation Campaign in Five States, WaterAid, New Delhi

2 Chapter 5: Total Sanitation Campaign: Addressing Sustainability Challenges
Techniques such as those described above have helped several NGOs progress successfully from IEC to Behaviour Change Communication (BCC) and thereby overcome attitudinal resistance. However, there is still scope for developing a template that examines the institutional and human resource requirements of BCC.

3. Human Resources

Arghyam sought to understand the human resource requirements of a sustainable sanitation programme. It discovered that the availability of human resources to plan and implement such a campaign has not been documented as a result of which there are no thumb rules available.

An analysis of the initiatives of Gramalaya and Gram Vikas highlights the importance of investing in human resources to create awareness, bring about behavioural change and build a sustainable sanitation campaign. However other organisations seeking to initiate similar campaigns in their own areas must note that the figures cannot be generalised as institutional models and styles of functioning differ from organisation to organisation.

Gramalaya

The first phase of three years saw the engagement of 20 staff to work among 25,000 households in 158 villages (Diagram 2). While 14 of the 20 were field staff, the daily presence of the SHGs in the community ensured the emergence of the desired behaviour. The human resource requirement was reduced to 10 (half the original number) in the fourth year as the programme progressed into its second phase. The focus shifted to IEC and hygiene education, consolidation training and follow-up with the SHGs that drive the programme.

Based on the above model, the overall software cost works out to Rs 1,000 per household. This figure does not include the NGO’s institutional costs. Because of the time and resources spent on community mobilisation and IEC, the sustainability of the 25,000 toilets in terms of usage and maintenance is almost 90 per cent.

Gram Vikas

Gram Vikas’ programme area covers 60 villages in Orissa. Implementation begins once the entire village has agreed to adopt sanitation using the MANTRA approach. This takes approximately two years. Beyond this period, Gram Vikas, unlike Gramalaya, intensifies its community engagement based on its assessment that this phase requires extensive handholding to ensure usage, promote hygiene and sensitise the community to the importance of O&M. Women village supervisors are inducted to intensify the campaign. Gram Vikas spends Rs 3,500 per household on staff costs (Diagram 3) and another Rs 1,000 on capacity building, IEC material, etc. According to them, the sustainability is 100 per cent with software costs accounting for roughly 27 per cent of the total cost.

B. HARDWARE

This section discusses the need to meticulously consider the geographical, geo-hydrological and climatic appropriateness of technology options. It also describes innovative cost-cutting experiments conducted by civil society organisations.

1. Technology Options

One of the drawbacks of the TSC is that the limited technology options it offered did not cater to the diverse socio-economic (poor/tribal areas), geographical (hills, deserts, etc), geo-hydrological (low/ high water
TABLE 4: Choices of technology

<table>
<thead>
<tr>
<th>Description</th>
<th>Single-pit</th>
<th>Twin-pit</th>
<th>Ecosan</th>
<th>Toilet with bathroom</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Suitability</strong></td>
<td>Not suitable in waterlogged, shallow water table areas</td>
<td>Not suitable in waterlogged, shallow water table areas</td>
<td>Suitable almost everywhere</td>
<td>Offers privacy; takes into account the needs of women during menstrual period</td>
</tr>
<tr>
<td><strong>Disadvantages</strong></td>
<td>Likely to fill up fast and result in disuse; improper design leads to pollution of groundwater</td>
<td>Improper design leads to pollution of groundwater</td>
<td>Demands intense behavioural change; needs management inputs</td>
<td>None</td>
</tr>
<tr>
<td><strong>Hardware cost</strong></td>
<td>Rs 3,000-3,500</td>
<td>Rs 5,000-6,000</td>
<td>Rs 8,000-12,000</td>
<td>Rs 12,000*</td>
</tr>
</tbody>
</table>

* Includes cost of twin-pit and water connection
Source: Field inputs from Arghyam partners

Toilets require space, one of the most common constraints of rural communities attempting to achieve sanitation coverage. About a third of ASHWAS respondents in Karnataka cited space as one of the main reasons for opting for open defecation rather than toilets. Inputs from several organisations suggest that this is also true of the rest of the country. Gram Vikas and the Ahmednagar based Watershed Organisation Trust address this issue by constructing toilet blocks in common areas. Owned and managed by the individuals who have contributed to their construction, these toilets are the outcome of successful dialogue and negotiation between the villagers and GPs concerned.

2. Water
The sustained use of toilets demands a regular supply of water. Many studies have shown that the toilets constructed as part of the TSC fall into disuse due to a lack of water supply. Investments for water supply are not accounted for in the infrastructure costs provided by the TSC. According to Gramalaya, water supply connections in their programme area cost between Rs 2,000 to Rs 2,500 per household (Table 4). There are several interesting civil society initiatives, some of them cited below, that address this issue (Image 7):

**Gram Vikas**
Gram Vikas employs a strategy that helps communities build toilets and bathrooms with water supply. These toilet-bathrooms and water tanks are designed and laid out in consultation with the villagers. Provision of round-the-clock water supply (at the rate of 40 litres per capita) costs Rs 4,000 to Rs 5,000 per household.

**MYKAPS**
MYKAPS, which is active in B. Matekere colony in H.D. Kote taluka, Karnataka, adopts a conjunctive use of groundwater and rainwater to meet household water needs and sanitation. Its ecosan toilets require water only for anal cleaning (and none for flushing) and use rainwater stored for the purpose.

3. Waste Management
Solid and liquid waste management constitutes the least discussed aspect of sanitation. TSC guidelines state that “Panchayati Raj Institutions (PRIs) are required to put in place mechanisms for garbage collection and disposal and to prevent waterlogging. As per GoI norms, up to 10 per cent of the project cost can be utilised to meet capital costs incurred for this purpose. The fund-sharing pattern between the centre, state and community would be in the ratio of 60:20:20.

* Water supply in Gramalaya's programme area is partly funded by the Tamil Nadu Water Supply and Drainage Board (TWAD)
This component includes hardware activities such as common compost pits, low cost drainage, soak pits, and systems to reuse wastewater as well as collect, segregate and dispose of household garbage may be taken up4.

According to DDWS data as of December 1, 2009, only 15,844 solid and liquid waste management projects have been implemented in 626 districts across the country. One of the major reasons for this is the lack of inventory and information on appropriate technologies, their cost and O&M procedures. Thus, while TSC guidelines do envisage taking sanitation beyond toilets, the challenge of implementing this in letter and spirit still remains.

4. Innovations for Cost-cutting

It has been argued that superstructure costs make sustainable sanitation models unaffordable. Some of the experiments undertaken to cut costs by using locally available materials, are presented in Images 8-10.

**Rural Education for Action and Liberation**

Aided by UNICEF, Rural Education for Action and Liberation (REAL) has developed cost-effective models using locally available materials for superstructures. These include superstructures made of hollow bricks (Rs 6,388 per toilet), coconut thatch (Rs 5,978 per toilet) and waste wood (Rs 5,900 per toilet)4.

**Youth Volunteers Union**

The Youth Volunteers Union (YVU) in Kabrang village, Manipur, has been experimenting with ecosan toilets with bamboo superstructures wherein frames from locally available bamboo are used in place of the chicken wire mesh of ferrocement panels (Image 8). These frames are then coated with cement mortar, presenting a cost-effective and durable alternative to higher cost standard construction materials.

**C. GOVERNANCE**

The following section discusses the need for an integrated approach, capacity building and inclusive financing models.

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**IMAGE 8:** Local, cost effective and durable: Kabrang village, Manipur

Photo courtesy: Amitangshu Acharya, Arghyam
IMAGE 9: Innovations in superstructure

Gramalaya: Hollow block brick
WWAGS: Bamboo and hay

Gramalaya: Low cost slab for a toilet with bathroom

Photo courtesy: Abigail Brown, Arghyam; Wangjing Women and Girls Society (WWAGS)

IMAGE 10: Low cost ferrocement superstructure: Gramalaya

Photo courtesy: Amrtha Kasturi Rangan, Arghyam
1. Integrated Planning

The revised guidelines of the NRDWP call for the convergence of water supply and sanitation programmes. However, there are very few models available on the ground. Most of the programmes implemented so far treat water and sanitation as separate entities, precluding the convergence of related programmes.

Consequently water is drawn and used but the wastewater generated is either untreated or partially treated before being disposed into the land or a nearby water body. This results in pollution of the water source itself, negating efforts to provide safe and affordable water.

The grassroots model of integration implemented by Arghyam’s partners in about 20 villages in Bundelkhand and Karnataka shows how integration brings in synergy and prevents programmes from becoming counter-productive to each other (Diagram 4). It ensures that toilets do not pollute water sources and that there is water supply available for the toilets, both aspects that must be considered during the preparation of the action plan. This model emphasises strengthening local institutions and build the community’s capacity to plan and implement integrated village water management plans of which sanitation is an important component. An integrated plan such as this needs strong institutions and governance systems built on principles of equity and sustainability.

2. Institutional Capacity

Village level institutions, and PRIs in particular, lack the capacity to conceive and monitor the implementation of the software and hardware components of a sanitation campaign. This impacts implementation, social mobilisation and maintenance of infrastructure in the post-implementation phase.

There is also a shortage of skilled manpower to implement the hardware plan of a sustainable sanitation programme at the block and village level. The TSC needs to increase capacity at all levels, whether it is masons to set up sustainable sanitation models or PRI members to act as change agents.

CCDUs

The Communication and Capacity Development Units (CCDUs) were launched by the DDWS to promote reform initiatives in the field of drinking water supply and sanitation at the state level (Diagram 5). These units were created to build institutional and human capacities to effectively implement the TSC and achieve the key objectives of demand generation, behavioural change and capacity building through IEC and human resource development. The CCDUs organise two- to 10-day training programmes targeted at GP, block and district level functionaries (Annexure 2).

The WaterAid evaluation of 2008 showed that while CCDUs exist in almost every state, they are more active
in some states than in others and have not yet emerged as reliable resources with regard to sanitation. One of the disablers identified by the study was the shortage of dedicated staff with role and function clarities. In this regard, it pointed out that government officials such as junior engineers in charge of sanitation were over-burdened with multiple roles, as a result of which sanitation was assigned low priority.

To be effective, capacity-building attempts must be continuous rather than isolated events. More emphasis must also be laid on the training of trainers, and refresher programmes for trainees on a periodic basis. For this, there is a need for a dedicated cadre of trainers, with a career progression system.

Block-level sanitation resource centres

Dedicated resource centres need to be established to impart hands-on training on sustainable sanitation models to masons. Longer duration programmes would be required for this. These centres could be modelled to train PRIs staff at the village and block levels to undertake social mobilisation programmes and help them understand O&M and sustainability. There are several successful civil society initiatives in this direction (Box 4). In the People’s Learning Centre of Utthan, an Ahmedabad based NGO, state, district and area resource groups are trained on watsan. Gramalaya’s National Institute of Water and Sanitation (NIWAS) is another example.

3. Incentive Regime

There are two schools of thought regarding subsidies and incentives. One maintains that incentives do help motivate the community. However, a WaterAid study argues that state government subsidies and incentives failed to work in Bihar and Chhattisgarh in the absence of focussed IEC and community mobilisation initiatives. On the other hand, CLTS was successfully implemented in Haryana, where a conscious effort was made to downplay TSC subsidies and incentives.

Structure

The current incentive structure neither covers the cost of water supply nor is it consistent with the real cost of sustainable sanitation models (Table 5). The

### TABLE 5: Incentive structure, TSC

<table>
<thead>
<tr>
<th>Model</th>
<th>Contribution (% total cost)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GoI</td>
</tr>
<tr>
<td></td>
<td>BPL</td>
</tr>
<tr>
<td>Model 1: Rs 1,500 (including superstructure)</td>
<td>60</td>
</tr>
<tr>
<td>Model 2: Rs 1,500-2,000</td>
<td>30</td>
</tr>
<tr>
<td>&gt;Rs 2,000</td>
<td>0</td>
</tr>
</tbody>
</table>

Note: Incentives revised to Rs 2,200; revised structure not available

Source: TSC guidelines 2007, Department of Drinking Water Supply, Government of India

People’s Learning Centre: Initiated in 2006 by the Ahmedabad based NGO Utthan, People’s Learning Centre (PLC) sensitises and fosters integrated social and technical learning to enhance the skills and capacity of communities and decision makers. Here, capacity is built at district, block and area level through State, District and Area Resource Groups (SRGs, DRGs and ARGs).

The ARGs comprise an average of 15 members each. They began working with pani samitis (water committees) in September, 2009, and helping to prepare watsan village level plans. As of December, 2008, 49 members of three ARGs have been associated with 115 villages in 96 GPs across three blocks of the Ahmedabad and Bhavnagar districts. They collected watsan data in these villages and have prepared action plans for six villages so far. A 60-day training programme for a 25-member ARG costs about Rs 70,000.

The DRGs consist of social and physical science experts, engineers, etc, whose primary responsibility is to train and support the ARGs. They act as mentors to the ARGs, and are expected to have a good understanding of the micro/ macro issues involved in watsan and stay abreast of the ongoing changes within the sector.

National Institute of Water and Sanitation (NIWAS): Run by Gramalaya in Kolakudipatti village, Tiruchirappalli, this institute offers training in watsan, skill development, entrepreneurship and other subjects required for the implementation of watsan activities. These programmes are targeted at village communities such as SHG members, federation leaders, village presidents, school teachers and students. Gramalaya also operates a Centre for Toilet Technology and Training to conduct research and training on technology models for sanitation. More than 2,300 people were trained in 2008.

Centre of Excellence (CoE), University of Agricultural Sciences: Arghyam supports the University of Agricultural Sciences (UAS), Bengaluru, and has helped set up a Centre of Excellence (CoE) on ecological sanitation. Research on the application of urine as a nutrient supplement for various crops is underway here. The UAS works both on campus demonstration plots and in the fields to develop protocols for human urine application. Experiments to develop the protocols for application of cattle urine in agriculture are also being conducted here. Knowledge and protocols from the research is will be disseminated to farmers through krishi vigyan kendras, krishi melas, exposure visits, workshops and the mass media.

Mason training programme, Gram Vikas: Gram Vikas offers a 75-day training programme in plumbing and toilet construction to unskilled daily wage labourers. Trainees are offered a stipend of Rs 60 per day to encourage participation. The programme involves 60 days of classroom sessions and 15 days of fieldwork.

Source:
1. J. Geetha 2009, personal communications, December
2. Joe Madiath 2009, personal communications, December

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**Note:** For the table, contributions to the total cost are rounded to the nearest whole number.
structure for hardware costs also ignores the diversity of Indian conditions. It offers, for instance, an incentive of Rs 2,200 to below poverty line (BPL) households for the construction of toilets, whereas the cost of sustainable options ranges from Rs 3,000 to Rs 12,000 (Table 4). This is a clear indication that TSC figures must be reassessed.

The WaterAid study mentioned earlier also quotes the March 2005 midterm evaluation of the TSC by the Agriculture Finance Corporation (AFC). The AFC maintains that “the quantum of subsidy as well as unit costs need to be revised suitably and made area-specific rather than uniform all across the country, through a realistic assessment of material and construction costs, availability of material and practicability”.

Inclusiveness
The TSC offer incentives only for BPL households and permit the states to offer incentives to APL households. Bihar, for instance, offers APL households an incentive of Rs 3,500 for a toilet costing up to Rs 2,000; BPL households receive Rs 1,700 for the same. However, several states have chosen not to provide incentives to APL families, thereby excluding a critical mass from the TSC. Recent data by the DDWS corroborates the exclusion – sanitation coverage of BPL households is higher in most of the states than APL households (Graph 4).
Several NGOs have set up innovative financing models (Box 5) to address the difficulties faced by the rural communities in mobilising funds. These include cross-subsidies (Gram Vikas), revolving funds through linkages with financial institutions (Gandhi Gram Trust and Gramalaya). These mechanisms have facilitated greater financial participation by helping empower individuals in the lower economic strata.

**Timeliness**

Delayed disbursement of government incentives has been another cause for concern, with instances where beneficiaries have had to wait for almost three years to receive their incentive amount. This has greatly inconvenienced communities that draw from their often stressed personal resources to pay for the construction of toilets. Therefore, incentive disbursement needs to be prompt.

In the light of the factors enumerated above, it is imperative that costs, incentives and subsidies are re-evaluated. The approach to incentives and subsidies must be inclusive and realistic; a blanket incentive structure will not work for the entire country.

**Box 5: Innovative financing models**

**Cross-subsidies:** The Gram Vikas model is initiated by collecting an average of Rs 1,000 per family towards a village corpus fund. Although the rich subsidise the poor, every member of the community must contribute at least Rs 100. The fund is placed in a term deposit where it earns interest that is only used to subsidise the cost of external construction materials for new households. This prevents slippages and ensures 100 per cent sanitation coverage in the village at all times.

Gram Vikas’ programme provides toilets with bathrooms and water connections, the combined cost of which is Rs 12,000. In the case of BPL households Rs 5,000 is mobilised from incentives (Rs 3,800 from Gram Vikas and Rs 2,200 from the government) whereas incentives for APL households constitute Rs 3,000. The corresponding amount for non-BPL Scheduled Caste/ Scheduled Tribe households is Rs 3,500. The rest of the cost is contributed by the community in the form of labour and building materials such as sand and brick.

**Linkages with financial institutions:** Several NGOs support and leverage loans from financial institutions. For instance, Gramalaya mobilised 68 per cent of its total investment of Rs 286 lakh on sanitation for 158 villages through such linkages.

**Revolving funds:** Working with 153 women’s SHGs, the Tamil Nadu based NGO Gandhi Gram Trust (GGT) introduced a Rs 3 lakh revolving fund for six months. Every member was eligible for an interest-free loan amount of Rs 4,000 to be repaid in six months. Defaulting on the payments was rare as the community had internalised the need for 100 per cent sanitation coverage in the village. This strategy enabled the villagers to construct over 800 twin-pit toilets in 12 months.

Source: 1. Joe Madiath 2009, personal communications, December  
2. J. Geetha 2009, personal communications, December
Civil society organisations have taken between three to five years to implement sustainable sanitation campaigns. This chapter presents a template of the social, technical, financial and institutional activities of the four phases involved, as well as investment trends pertaining to each phase. Also presented are timeframes for activities required to ensure the sustainability of the campaign.

The phases of a sustainable sanitation campaign as described here were defined on the basis of responses from civil society organisations to a preliminary template circulated by Arghyam. WaterAid supported the effort by circulating the template among its own partners for a wider response.

A. PHASES OF A SUSTAINABLE SANITATION CAMPAIGN

A typical sanitation campaign consists of four distinct phases that involve planning, laying the foundation for, implementing and finally ensuring that the toilets constructed continue to remain in use.

Building relationships with the community, selecting appropriate hardware, ensuring the smooth flow of funds, monitoring quality and inculcating a sense of ownership constitute some of the key aspects of the campaign. These are discussed in greater detail below.

1. Phase I: Pre-planning/Preparatory

This phase, which takes about six months, involves identifying a programme area and conducting background studies and literature surveys. It also entails making an inventory of technical, financial and gender sensitive social models suitable for the area selected for intervention.

A checklist of activities conducted during this phase is detailed below:

- Initiating discussions with PRIs and local government institutions in regard to the location of the project
- Identifying existing community based organisations (CBOs) or forming new ones with the participation of the local community
- Mobilising the community through participatory situational analysis and discussion; instituting a dedicated watsan committee at the village level, support groups at the area, block and district levels,
and determining their roles in capacity building

- Triggering social mechanisms to discourage open defecation and encourage the community to adopt hygiene and sanitation practices
- Creating awareness about the programme and its impact; imparting training on the social and technical aspects of implementation
- Conducting baseline studies to help articulate the ground realities of water and sanitation (including the presence of toilets or lack thereof; solid and liquid waste management systems; school sanitation; sanitation for the vulnerable and disabled, etc); menstrual hygiene practices, availability of human resources, functionality of institutions, existence of supply chain mechanisms, etc. (For a detailed questionnaire concerning this subject, please see Annexure 3)
- Compiling an inventory of technical and financial models to facilitate decision making in regard to household and institutional sanitation

2. Phase II: Planning/Foundation
Marked by the beginning of participatory planning, this phase runs parallel to the first until preparation is complete. It may be expected to last approximately a year.

- Discussing, preparing and finalising plans: Technical, financial and software (IEC and awareness, training, school sanitation, hygiene education, human resources, etc)
- Using the lenses of local specificity, affordability, economic viability, user-friendliness and gender equity to arrive at appropriate plans
- Identifying and finalising funding sources (government, banks, SHGs, other donors, etc). Mobilising community contributions helps inculcate ownership and ease implementation
- Devising strategies to converge sanitation with the NRDWP (to ensure integration of programmes as well

**IMAGE 14**: Brick by brick: Ecosan toilet, Manipur

Photo courtesy: Nelson Royal, Arghyam; YVU
This phase begins around the sixth month or as the active part of the campaign. It can extend from three to six months of the campaign. Implementation represents the most critical phase of the project.

**Phase III: Implementation**

Activities relevant to each phase are categorized under implementation activities. Table 6 presents a checklist of activities relevant to each phase. Activities relevant to each phase are categorized under the following heads:

<table>
<thead>
<tr>
<th>Phase</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-planning/Preparatory/0-6 months</td>
<td>Social Mobilization: Entry point activities, convening gram sabha to discuss the programme, identifying existing O&amp;M platforms</td>
</tr>
<tr>
<td>Planning/Foundation/0-12 months</td>
<td>Social Mobilization: Raising awareness, creating demand, etc</td>
</tr>
<tr>
<td>Implementation/3-30 months (could extend to 60 months depending on the progress in behavioral change)</td>
<td>Social Mobilization: Creating demand, building awareness about O&amp;M, sustaining usage</td>
</tr>
<tr>
<td>Sustaining Usage: O&amp;M and Governance</td>
<td>Social Mobilization: Building awareness about O&amp;M, sustaining usage</td>
</tr>
</tbody>
</table>

**Implementation:** This phase is divided into two sub-phases:yii

1. **Preplanning/Preparatory:** This phase is focused on planning and establishing linkages with existing RSMs (in the case of government-based campaigns) to ensure a steady supply of construction material.

   - **Pre-planning/Preparatory | 0-6 months**
     - **Planning:** As all the categories listed above involve planning, these have been depicted separately in Table 6.
     - **Institutions:** Interacting with GOs, NGOs, GOIs, etc; setting up community monitoring systems; triggering social convergence of the GP, other government programmes, etc.
     - **Management Information Systems:** Inventorying/literature survey; software activities, etc.
     - **HR:** Estimating manpower requirements for mobilization and implementation activities. Table 6 presents a checklist of activities relevant to each phase. Activities relevant to each phase are categorized under the following heads:

   - **Social:** Mobilisation, participatory planning and social mobilisation; vulnerable and special needs populations; menstrual hygiene and management.
   - **Technical:** Baseline studies; technical models; participatory planning; management information systems and material flow management; construction; monitoring; O&M; post-project study.
   - **Financial:** Financial models; funding options; fund/flow management; O&M funding; institutional Formation of O&M, strengthening existing GOs/GIs; convergence; monitoring, evaluation/mechanism; social audits; governance.
   - **Planning:** As all the categories listed above involve planning, these have been depicted separately.

2. **Implementation:**

   - **Implementation/3-30 months (could extend to 60 months depending on the progress in behavioral change)**
     - **Social:** Mobilisation, building awareness about O&M, sustaining usage.
     - **Technical:** Baseline studies, software activities, etc.
     - **Financial:** Financial models; funding options; fund/flow management; O&M funding; institutional Formation of O&M, strengthening existing GOs/GIs; convergence; monitoring, evaluation/mechanism; social audits; governance.
     - **Planning:** As all the categories listed above involve planning, these have been depicted separately.

**Institutional Process:**

- **Planning:** As all the categories listed above involve planning, these have been depicted separately in Table 6.
- **Institutional Process:** Interacting with GOs, NGOs, GOIs, etc; setting up community monitoring systems; triggering social convergence of the GP, other government programmes, etc.
- **Management Information Systems:** Inventorying/literature survey; software activities, etc.
- **HR:** Estimating manpower requirements for mobilization and implementation activities. Table 6 presents a checklist of activities relevant to each phase. Activities relevant to each phase are categorized under the following heads:

   - **Social:** Mobilisation, participatory planning and social mobilisation; vulnerable and special needs populations; menstrual hygiene and management.
   - **Technical:** Baseline studies; technical models; participatory planning; management information systems and material flow management; construction; monitoring; O&M; post-project study.
   - **Financial:** Financial models; funding options; fund/flow management; O&M funding; institutional Formation of O&M, strengthening existing GOs/GIs; convergence; monitoring, evaluation/mechanism; social audits; governance.
   - **Planning:** As all the categories listed above involve planning, these have been depicted separately.

**Management Information System:**

- **Planning:** As all the categories listed above involve planning, these have been depicted separately in Table 6.
- **Institutional Process:** Interacting with GOs, NGOs, GOIs, etc; setting up community monitoring systems; triggering social convergence of the GP, other government programmes, etc.
- **Management Information Systems:** Inventorying/literature survey; software activities, etc.
- **HR:** Estimating manpower requirements for mobilization and implementation activities. Table 6 presents a checklist of activities relevant to each phase. Activities relevant to each phase are categorized under the following heads:

   - **Social:** Mobilisation, building awareness about O&M, sustaining usage.
   - **Technical:** Baseline studies, software activities, etc.
   - **Financial:** Financial models; funding options; fund/flow management; O&M funding; institutional Formation of O&M, strengthening existing GOs/GIs; convergence; monitoring, evaluation/mechanism; social audits; governance.
   - **Planning:** As all the categories listed above involve planning, these have been depicted separately.

**TABLE 6: Phase-wise activity checklist**

<table>
<thead>
<tr>
<th>Phase I: Pre-planning/Preparatory/0-6 months</th>
<th>Phase II: Planning/Foundation/0-12 months</th>
<th>Phase III: Implementation/3-30 months (could extend to 60 months depending on the progress in behavioral change)</th>
<th>Phase IV: Sustaining Usage: O&amp;M and Governance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-planning/Preparatory/0-6 months</strong></td>
<td><strong>Planning/Foundation/0-12 months</strong></td>
<td><strong>Implementation/3-30 months (could extend to 60 months depending on the progress in behavioral change)</strong></td>
<td><strong>Sustaining Usage: O&amp;M and Governance</strong></td>
</tr>
<tr>
<td>Social Mobilization: Entry point activities, convening gram sabha to discuss the programme, identifying existing O&amp;M platforms</td>
<td>Social Mobilization: Raising awareness, creating demand, etc</td>
<td>Social Mobilization: Creating demand, building awareness about O&amp;M, sustaining usage</td>
<td>Social Mobilization: Building awareness about O&amp;M, sustaining usage</td>
</tr>
<tr>
<td>Software Activities: ICT, exposure visits, hygiene education, identifying training needs (school sanitation, menstrual hygiene, etc) and resources</td>
<td>Software Activities: ICT, exposure visits, hygiene education, preparing communication plans and training modules (school sanitation, menstrual hygiene) for GOs, GOIs, teachers, masses</td>
<td>Software Activities: Hygiene education, conducting training programmes (O&amp;M, wastewater disposal, hygiene, school sanitation)</td>
<td>Software Activities: Hygiene education, conducting training programmes (O&amp;M, wastewater disposal, hygiene, school sanitation)</td>
</tr>
<tr>
<td>Institutional Process: Interacting with GOs, NGOs, GOIs, etc; setting up community monitoring systems; triggering social convergence of the GP, other government programmes, etc.</td>
<td>Institutional Process: Strengthening institutional, forming action committees, and district resource groups; exploring scope for convergence of GP, other government programmes, etc.</td>
<td>Institutional Process: Initiating social audits/community monitoring of construction, etc</td>
<td>Institutional Process: Community monitoring of construction, etc; social pressures; triggers for open-defecation, closure of toilets, etc; motivating vulnerable communities</td>
</tr>
<tr>
<td>Management Information Systems: Inventorying/literature survey; software activities, etc</td>
<td>Management Information Systems: Inventorying/literature survey; software activities, etc</td>
<td>Management Information Systems: Inventorying/literature survey; software activities, etc</td>
<td>Management Information Systems: Inventorying/literature survey; software activities, etc</td>
</tr>
<tr>
<td>HR: Estimating manpower requirements for mobilization and implementation activities. Table 6 presents a checklist of activities relevant to each phase. Activities relevant to each phase are categorized under the following heads: Social, technical, financial and institutional heads, as described below:</td>
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</tr>
<tr>
<td>Baseline Studies/Need Assessment: Socio-economic, gender diversity, financial, etc; identifying vulnerable and special needs populations; menstrual hygiene and management</td>
<td>Baseline Studies/Need Assessment: Socio-economic, gender diversity, financial, etc; identifying vulnerable and special needs populations; menstrual hygiene and management</td>
<td>Baseline Studies/Need Assessment: Socio-economic, gender diversity, financial, etc; identifying vulnerable and special needs populations; menstrual hygiene and management</td>
<td>Baseline Studies/Need Assessment: Socio-economic, gender diversity, financial, etc; identifying vulnerable and special needs populations; menstrual hygiene and management</td>
</tr>
<tr>
<td>Technical Inventorisation/Literature Survey: Identifying models for behaviour change, school sanitation, vulnerable and special needs populations, menstrual hygiene and management</td>
<td>Technical Inventorisation/Literature Survey: Identifying models for behaviour change, school sanitation, vulnerable and special needs populations, menstrual hygiene and management</td>
<td>Technical Inventorisation/Literature Survey: Identifying models for behaviour change, school sanitation, vulnerable and special needs populations, menstrual hygiene and management</td>
<td>Technical Inventorisation/Literature Survey: Identifying models for behaviour change, school sanitation, vulnerable and special needs populations, menstrual hygiene and management</td>
</tr>
<tr>
<td>Human Resources: (HR) Devising manpower for hardware and software activities</td>
<td>Human Resources: (HR) Devising manpower for hardware and software activities</td>
<td>Human Resources: (HR) Devising manpower for hardware and software activities</td>
<td>Human Resources: (HR) Devising manpower for hardware and software activities</td>
</tr>
<tr>
<td>Supply Chain: Establishing linkages to ensure availability of hardware</td>
<td>Supply Chain: Establishing linkages to ensure availability of hardware</td>
<td>Supply Chain: Establishing linkages to ensure availability of hardware</td>
<td>Supply Chain: Establishing linkages to ensure availability of hardware</td>
</tr>
<tr>
<td>Post-project Strategy: Operationalising exit strategy; activating institutional arrangements to ensure sustainability.</td>
<td>Post-project Strategy: Operationalising exit strategy; activating institutional arrangements to ensure sustainability.</td>
<td>Post-project Strategy: Operationalising exit strategy; activating institutional arrangements to ensure sustainability.</td>
<td>Post-project Strategy: Operationalising exit strategy; activating institutional arrangements to ensure sustainability.</td>
</tr>
</tbody>
</table>

**Note:** Financial and activities listed above are indicative. For example, an organization with prior experience in sanitation may select only the relevant activities.
sustainability takes between 36 to 60 months depending upon the unit of operation (district, block, village), the relationship that the implementing organisation shares with the community and other local specificities (Graph 5). An organisation starting afresh will be faced with a longer campaign than one that has been active in the area for some time. Infusing sustainability into sanitation campaigns calls for processes to which adequate time must be allotted; a hasty, target-driven project is unlikely to yield the desired results.

D. RESOURCES

The experiences of the civil society organisations discussed here show that the financial investment must be spread across the length of the campaign – a onetime investment is futile. The following section analyses trends in budgetary allocation to various components and phases of the sanitation campaign.

1. Hardware:Software Costs

The ratio of the hardware to software cost is in the range of 10 per cent (Gramalaya) to 27 per cent (Gram Vikas). Ten per cent of Gramalaya’s software allocation is spread over a period of five years (Graph 7). Unlike the government’s current trend wherein IEC expenditure is incurred during the initial phases, the NGOs’ investment is spread over the length of the programme period. More importantly, the investment is in a focused IEC campaign specifically designed to target individuals and households.

NGOs differ greatly in their fund allocation for software and hardware. Software costs depend on an individual NGO’s budget, mode of functioning and the socio-economic and cultural conditions specific to its programme area. Gramalaya reportedly spent Rs 1,000 per household on software, while Gram Vikas reported an expenditure of Rs 4,500 per household on software components.

2. Phase-wise Allocation

The four phases of a sanitation campaign deserve equal attention and careful fund allocation. As

**ACTIVITY CHECKLIST**
discussed earlier, paying adequate attention to the pre-planning and planning phases is crucial to smooth implementation and sustainability. It is reported that the TSC emphasised construction at the cost of planning and sustainability.

As typology specific thumb rules regarding expenditure do not currently exist, we present an analysis of the budgets of four grassroots organisations – MYKAPS, Lok Shakti Samiti (LSS), Gram Vikas and Dharti Gramothan Evam Shabhagi Gramin Vikas Samiti (DGSGVS). As Graph 6 indicates, the bulk of resources is earmarked for the implementation phase, with the remainder divided almost equally between the other phases.

<table>
<thead>
<tr>
<th>Phase</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-planning/Preparatory</td>
<td>5-15%</td>
</tr>
<tr>
<td>Planning/Preparatory</td>
<td>10-30%</td>
</tr>
<tr>
<td>Implementation</td>
<td>60-75%</td>
</tr>
<tr>
<td>Sustaining Usage</td>
<td>5-20%</td>
</tr>
</tbody>
</table>

3. Year-wise Allocation

The annual investment of a sustainable sanitation campaign may be calculated by reorganising phase-wise expenditure. It is important to bear in mind that several phases of a typical five-year campaign may run parallel to each other. For instance, expenditure for the first year, which ranges from seven to 20 per cent, includes the sum of costs incurred during all four phases for that year. Graph 8 shows that the investment is lowest during the first year, which is when the campaign is just beginning. Subsequent expenditure (from the second year onwards) stays consistent from year to year.

<table>
<thead>
<tr>
<th>Year</th>
<th>Range (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>7-20%</td>
</tr>
<tr>
<td>2</td>
<td>20-25%</td>
</tr>
<tr>
<td>3</td>
<td>25-30%</td>
</tr>
<tr>
<td>4</td>
<td>15-30%</td>
</tr>
<tr>
<td>5</td>
<td>10-24%</td>
</tr>
</tbody>
</table>
This document was conceived as an illustrative rather than exhaustive tool. There are numerous civil society organisations in addition to the ones described here that have been heralding phenomenal change in the area of sanitation in India. It is important to document their processes and related resources into an inventory of approaches suitable for typologies across the country.

In addition to civil society initiatives there are also several PRIs that have been working with local communities and climbing the sustainable sanitation ladder with much success. As these organisations are crucial to taking the TSC forward, it is essential that we analyse enablers and disablers of their campaigns.

Sanitation initiatives in India have revealed a wide variety of software tools adopted by NGOs for behavioural change management. These must be analysed in greater depth for a more conclusive understanding of the process, time and money required for sustainability. It is also important to inventorise affordable and appropriate technologies for solid and liquid waste management in rural contexts across typologies. Menstrual hygiene is another area that requires urgent attention.

There are several models that successfully address the issues mentioned above. Documenting and analysing them will provide invaluable inputs to other organisations and hopefully facilitate better informed policy changes.
ANNEXURE 1: Sanitation coverage, India

<table>
<thead>
<tr>
<th>State</th>
<th>IHHL BPL (%)</th>
<th>IHHL APL (%)</th>
<th>IHHL APL+BPL (%)</th>
<th>Sanitary Complex (%)</th>
<th>School Toilets (%)</th>
<th>Balwadi Toilets (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andhra Pradesh</td>
<td>61.65</td>
<td>57.35</td>
<td>60.11</td>
<td>100</td>
<td>86.32</td>
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<tr>
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<td>20.32</td>
<td>14.67</td>
<td>19.88</td>
<td>10.06</td>
<td>87.40</td>
<td>66.61</td>
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<tr>
<td>Assam</td>
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<td>16.88</td>
<td>1.90</td>
<td>50.51</td>
<td>20.73</td>
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<tr>
<td>Bihar</td>
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<td>18.26</td>
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<td>14.44</td>
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<tr>
<td>Chhattisgarh</td>
<td>45.24</td>
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<td>39.71</td>
<td>23.46</td>
<td>91.75</td>
<td>75.22</td>
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<tr>
<td>Dadar &amp; Nagar Haveli</td>
<td>1.49</td>
<td>0.00</td>
<td>1.49</td>
<td>8.33</td>
<td>0.00</td>
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<td>Goa</td>
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<td>100</td>
<td>94.36</td>
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<tr>
<td>Haryana</td>
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<td>97.01</td>
<td>77.38</td>
<td>97.69</td>
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<td>89.10</td>
<td>86.47</td>
<td>13.52</td>
<td>35.88</td>
<td>27.45</td>
</tr>
<tr>
<td>Jammu &amp; Kashmir</td>
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<td>6.78</td>
<td>21.41</td>
<td>49.39</td>
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<td>7.02</td>
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<tr>
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<td>29.47</td>
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<td>Karnataka</td>
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<td>100</td>
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<td>93.92</td>
<td>65.44</td>
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<td>39.18</td>
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<td>100</td>
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<tr>
<td>Maharashtra</td>
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<td>55.57</td>
<td>55.82</td>
<td>42.26</td>
<td>92.05</td>
<td>96.15</td>
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<tr>
<td>Manipur</td>
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<td>7.38</td>
<td>27.20</td>
<td>37.13</td>
<td>13.24</td>
</tr>
<tr>
<td>Meghalaya</td>
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<td>25.85</td>
<td>20.00</td>
<td>22.99</td>
<td>12.03</td>
</tr>
<tr>
<td>Mizoram</td>
<td>97.50</td>
<td>95.50</td>
<td>97.06</td>
<td>61.43</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Nagaland</td>
<td>28.10</td>
<td>5.87</td>
<td>24.61</td>
<td>66.93</td>
<td>41.99</td>
<td>38.77</td>
</tr>
<tr>
<td>Orissa</td>
<td>43.17</td>
<td>15.30</td>
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<td>3.06</td>
<td>84.44</td>
<td>69.70</td>
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<tr>
<td>Puducherry</td>
<td>12.17</td>
<td>0.00</td>
<td>12.17</td>
<td>0.00</td>
<td>0.00</td>
<td>100</td>
</tr>
<tr>
<td>Punjab</td>
<td>17.96</td>
<td>70.43</td>
<td>42.42</td>
<td>15.33</td>
<td>93.14</td>
<td>23.70</td>
</tr>
<tr>
<td>Rajasthan</td>
<td>27.77</td>
<td>36.68</td>
<td>34.18</td>
<td>22.99</td>
<td>73.46</td>
<td>41.13</td>
</tr>
<tr>
<td>Sikkim</td>
<td>1.00</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Tamil Nadu</td>
<td>77.28</td>
<td>64.22</td>
<td>70.89</td>
<td>100</td>
<td>93.06</td>
<td>94.17</td>
</tr>
<tr>
<td>Tripura</td>
<td>95.22</td>
<td>94.30</td>
<td>95.02</td>
<td>71.68</td>
<td>86.96</td>
<td>76.31</td>
</tr>
<tr>
<td>Uttar Pradesh</td>
<td>62.96</td>
<td>44.72</td>
<td>52.03</td>
<td>98.38</td>
<td>89.85</td>
<td>72.57</td>
</tr>
<tr>
<td>Uttarakhand</td>
<td>46.52</td>
<td>40.00</td>
<td>41.25</td>
<td>11.28</td>
<td>57.63</td>
<td>18.43</td>
</tr>
<tr>
<td>West Bengal</td>
<td>89.42</td>
<td>48.10</td>
<td>70.85</td>
<td>47.37</td>
<td>4.55</td>
<td>28.59</td>
</tr>
</tbody>
</table>

Note: Values as % sanitation coverage; IHHL: Individual household toilets; BPL: Below poverty line; APL: Above poverty line

Source: Department of Drinking Water Supply 2009, Government of India, December

ANNEXURE 2: Trainings offered by CCDU

<table>
<thead>
<tr>
<th>Target Group</th>
<th>Duration (days)</th>
<th>Organisation Responsible for Training</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block level resource team</td>
<td>5</td>
<td>District resource team</td>
<td>District</td>
</tr>
<tr>
<td>Training for block level Programme Managers</td>
<td>3</td>
<td>District resource team</td>
<td>District</td>
</tr>
<tr>
<td>Training of Sarpanches, Panchayat Secretaries and CBOs</td>
<td>2</td>
<td>Block resource team</td>
<td>Block</td>
</tr>
<tr>
<td>Training of NGOs</td>
<td>3</td>
<td>District resource team</td>
<td>District</td>
</tr>
<tr>
<td>Training of engineers and Mart Managers on technology</td>
<td>3</td>
<td>District resource team</td>
<td>District/Block</td>
</tr>
<tr>
<td>Training of master masons for production centres and RSMs</td>
<td>7-10</td>
<td>District resource team</td>
<td>District/Block</td>
</tr>
<tr>
<td>Training of master masons for production centres and RSMs</td>
<td>7-10</td>
<td>Block resource team</td>
<td>Block</td>
</tr>
<tr>
<td>Training of motivators, SHGs, village health workers</td>
<td>2</td>
<td>Block resource team</td>
<td>Block</td>
</tr>
<tr>
<td>Training of parent-teacher associations, school management councils and teachers on school sanitation and hygiene education</td>
<td>3</td>
<td>Block resource team</td>
<td>Block</td>
</tr>
</tbody>
</table>

Source: Department of Drinking Water Supply, Government of India
ANNEXURE 3: Baseline survey on Sanitation, liquid and solid waste management

Presented below is a questionnaire that may be used for baseline surveys on sanitation, solid/liquid waste management and hygiene. It also covers aspects related to gender especially women issues. This questionnaire is reproduced from A Survey of Household Water and Sanitation (ASHWAS) conducted across 17,200 households in Karnataka. The household, village and gram panchayat level questionnaires related to water, governance etc may be downloaded from www.ashwas.indiawaterportal.org

3. **Sanitation**

3.a. **Household toilets**

1. Do you have a toilet in your house? [ ] Yes [ ] No

2. If no, reason(s) for not constructing one?
   - Financial constraints
   - Lack of space
   - Not needed or not a priority
   - Prefer open defecation
   - Others (specify)

3. Do you know about any government schemes on sanitation? [ ] Yes [ ] No

4. Is there a community toilet in the village? [ ] Yes [ ] No [ ] Don’t know

5. Where do you normally defecate? (multiple responses allowed)
   - Household toilet
   - Community toilet
   - Shared toilet
   - Open defecation (go to 3.a.4)

<table>
<thead>
<tr>
<th>General population</th>
<th>Aged/ disabled person/ pregnant woman/ person with special needs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

   Questions 6-19 are to be answered by households who have or use a toilet

6. How did you construct the toilet? (multiple responses allowed)
   - Own money
   - Govt/NGO funded (name of the project _____)
   - Govt incentive
   - Loan (bank, money lender, SHG, relatives etc)
   - Don’t know
   - Equal contribution (own funds) from all families
   - Unequal contribution (own funds) from all families
   - Not applicable, it is a community toilet

7. If funded by govt/NGO what percentage of funds came from govt?
   - <25%
   - 25-50%
   - 50-75%
   - 75%
   - 100%

8. What is the distance of the toilet from the closest water source/water body?
   - Very close
   - >10m
   - <10m

9. Do you use the toilet? [ ] Yes [ ] No

10. Do all the members in your family use the toilet? [ ] Yes [ ] No [ ] Don’t know

11. In addition to using toilets, do you or your family members also defecate in the open?
    - Daily
    - Sometimes
    - Rarely

12. What are the reasons for not using the toilet?
    - Not clean, not hygienic; smells
    - Too small and inconvenient
    - Open defecation is more convenient
    - No water
    - Damaged/defunct/ not working properly
    - Other reasons including cultural and religious (specify)

13. If using a toilet, what problems, if any, do you face while using the toilet?
    - It is too far
    - It is too small and inconvenient
    - Toilet has no water/ need to carry water for cleaning
    - Others (specify)

14. Who cleans the toilet? (multiple responses allowed)
    - HH toilets
    - Shared toilets
    - Wife
    - Husband
    - Son
    - Daughter
    - Family members
    - Responsibility shared by HH
    - Paid worker

15. Why do you have a toilet?
    - Privacy/dignity/safety
    - Convenience
    - Health
    - Others (specify)
16. What type of toilet do you have?1
- Pit latrine
- Ventilated improved pit latrine
- Compost/ ecosan toilet
- Flush

17. Where does the waste go?
- Single- pit
- Twin- pit
- Soak pit
- Septic tank
- Underground drainage/sewerage
- To the fields
- Manual scavenging
- Open drains
- Don’t know

18. Who motivated you to build a toilet?2
- GP/ VWSC
- TSC campaign
- ASHA/ VHSC
- Neighbours/ friend
- SHG

19. If you found out about the toilet from the GP, what did the GP do to motivate you to build toilets? (multiple responses allowed)
- Organised meetings to create awareness
- Organised exposure visits to well-covered villages
- Door-to-door campaigns
- Street plays/ wall paintings with the help of SHGs/ NGOs
- Sanctions (witholding ration cards, cutting off electricity, etc) against those who did not construct toilets

3.a.2. Community toilets
1. How much do you pay to use the community toilets?
- Do not pay
- Pay per visit per person (Rs ________)
- On a monthly basis (Rs ________)

2. Who cleans and maintains the community toilet?
- Gram panchayat
- SHG/ village committee
- Don’t know
- Nobody

3.a.3. Shared Toilets3
1. Why are you using a shared toilet?
- No money for a household toilet
- More convenient and hygienic than community toilets
- No space

2. How many families share this toilet?
- Two families
- Three families
- >3 families

3. Is the arrangement satisfactory? Yes No

3.a.4. Open defecation
1. Do you face any problems during open defecation? Yes No

If yes, what are the frequently encountered problems during open defecation
- Unsafe
- Uncomfortable
- Unhealthy
- Water problem
- Only possible to go in the early morning/ late evening
- Embarrassing
- Others

3.b. Liquid Waste Management
1. Is there drain in front of your house? Yes No

2. How do you dispose of household wastewater (other than sewage) from your house?
- Source of wastewater
- Open drains
- Closed and/or underground drains
- On to the streets (stagnant puddles found in the street)
- To a water body
- Cesspool/ puddle
- Soak pit
- Kitchen garden
- Don’t know

3. If there are drains, where do they lead?
- End of road
- Cesspool /puddle
- On to the streets
- To a water body
- Treatment unit
- Soak pit
- Don’t know

4. What is the state of drains in your village?
- Unclean and filled with solid waste
- Dilapidated
- Clean and well maintained

---

1 Conventional pit latrine: A latrine that does not require water for functioning, although a small amount may be used to clean the squat plate occasionally. Ventilated improved pit latrine: An improved conventional pit latrine, slightly offset from the pit. A tall vertical vent pipe gradually tapered towards the pit with a fly-screen fitted outside the superstructure traps flies and reduces odour. Pour flush/ water seal: A water-dependent latrine that uses water to flush out excreta from a bowl that consists of a water seal generally known as a trap. These latrines may be further categorised as pour flush and mechanical flush latrines

2 VWSC: Village Water Sanitation Committee; ASHA: Accredited Social Health Activist; VHSC: Village Health and Sanitation Committee

3 A shared toilet is one which is owned/ used by 2-3 families, where each family has a key to the toilet

---

### ANNEXURES

1. Clean and well maintained
2. Partially clean
3. Clean and unclean
4. Unclean and filled with solid waste
5. Dilapidated
5. How often is the drainage cleaned?

- Daily
- Once a month
- Once in six months
- Once a year
- Never cleaned

6. Who maintains the drainage system?

- Gram panchayat
- Village water and sanitation committee
- Voluntary organisation/SHG
- Individual households

3.c. Solid Waste Management

1. Where do you dispose of household garbage?

- Dustbin
- Own land (away from house)
- Streets
- Compost
- Burning

2. What is the overall sanitary condition of the village?

- Generally unclean
- Clean in some places
- Clean everywhere

3. What are your suggestions to improve water and sanitary conditions in your village?

3.d. Health and Hygiene

3.d.1. Health

1. In the last one year, has anybody in your house been affected by the following illnesses?

- 1: There were no illnesses
- 2: Affected by illness
- 3: Died due to illness

<table>
<thead>
<tr>
<th>Illness</th>
<th>Adult (0-12 months)</th>
<th>Infant (1-5 yrs)</th>
<th>Child</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diarrhea/ dysentery</td>
<td>1 2 3</td>
<td>1 2 3</td>
<td>1 2 3</td>
</tr>
<tr>
<td>Cholera</td>
<td>1 2 3</td>
<td>1 2 3</td>
<td>1 2 3</td>
</tr>
<tr>
<td>Typhoid</td>
<td>1 2 3</td>
<td>1 2 3</td>
<td>1 2 3</td>
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<tr>
<td>Gastroenteritis</td>
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<td>1 2 3</td>
</tr>
<tr>
<td>Jaundice</td>
<td>1 2 3</td>
<td>1 2 3</td>
<td>1 2 3</td>
</tr>
<tr>
<td>Vector-borne diseases (dengue, chikungunya, malaria)</td>
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<td>1 2 3</td>
<td>1 2 3</td>
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<tr>
<td>Others (specify)</td>
<td>1 2 3</td>
<td>1 2 3</td>
<td>1 2 3</td>
</tr>
</tbody>
</table>

3.d.2. Hygiene (water, sanitation)

1. How do you take drinking water out of the vessel?

- Pour from the vessel
- Put the glass/ cup into the vessel
- Use a dipper (ladle with a cup at the end)
- Use a tap

2. Handwashing (encircle relevant response)

<table>
<thead>
<tr>
<th>Activity</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>After defecation (or handling baby faeces)</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>Before cooking</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>Before eating</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>After handling pesticide</td>
<td>1 2 3 4</td>
</tr>
</tbody>
</table>

3. Where do you dispose of the children faeces?

- Dust bin
- Drainage
- Toilet
- Streets/ in the open
- Not applicable

3.e. Gender (Note: These questions must be directed by women at women)

3.e.1. Hygiene

1. Are there any adolescent girls in your house? Yes No

2. When you have periods, what type of protection do you use?

<table>
<thead>
<tr>
<th>Type of Protection</th>
<th>Women</th>
<th>Adolescent girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cloth</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Cotton (go to Q6)</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Sanitary napkin (go to Q7)</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

3. How do you wash that cloth?

- Water only
- Hot water only
- Soap/ soap powder
- Bleaching powder
- Not applicable, I throw out the cloth after each use

4. How often do you use a fresh cloth for this purpose?

- Everyday
- Every month
- Once in six months
- Once in 2-3 months
- Once in a year
- Never

---

*The typical symptom of diarrhea is watery stool. In the case of dysentery, the stool is in the form of mucus, with blood and the patient suffers from cramping and fever.*
5. Where do you dry the cloth?
- Out in the sun
- Outside in the shade where nobody can see
- Inside the house

6. Why don’t you use sanitary napkins?
- Expensive
- Not easily available
- Accustomed to cloth/cotton
- No other alternative
- Others (specify)

7. How do you dispose it off?
- I throw it in the toilet pit
- I throw it away in the field
- I burn it

8. In the past one year, have you or your adolescent daughter(s) experienced any of the following symptoms:

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Women</th>
<th>Adolescent girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burning sensation while urinating</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Urge to urinate frequently</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>White or cloudy urine, with or without blood</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Thick white discharge, with or without odour</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Digestion problems and acidity</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Stomach cramps from controlling urination</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

9. If you have to defecate in the open, what problems do you face?
- Unsafe
- Uncomfortable
- Unhealthy
- Water problem
- Only possible to go in the early morning/late evening
- Embarrassing
- Others

10. What is the additional burden on women due to individual/shared toilets? (multiple responses allowed)
- Need to collect more water for use in the toilets
- Need to clean it frequently
- None

11. Does the adolescent girl face any of the following issues? ☐ Yes ☐ No (encircle relevant code)

<table>
<thead>
<tr>
<th>Issue</th>
<th>Women</th>
<th>Adolescent girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of awareness on menstrual health</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>No toilet in school</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Stopped school due to lack of toilet</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Misses school to be able to collect water</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

12. Who takes decisions related to WATSAN in your household? (encircle relevant code)

- Only the men 1
- Men after consulting women sometimes 2
- Both men and women together 3
- Only the women 4

13. Do you participate in village level decisions related to WATSAN?
- Yes, I make sure my opinions are heard
- I attend most meetings and voice my concern but nobody listens
- I attend meetings but do not participate
- I don’t attend meetings

14. Is there an ASHA worker in your village? ☐ Yes ☐ No

15. What is the level of interaction with ASHA?
- ASHA workers regularly meet us and explain health issues
- ASHA workers hold frequent meetings to explain health issues
- ASHA workers put up posters
- No interaction with ASHA workers
Arghyam is an Indian public charitable foundation setup with an endowment from Rohini Nilekani, working in the water and sanitation sector since 2005. ‘Arghyam’ is a Sanskrit word meaning ‘offering’. Our vision is “safe, sustainable water for all”.

As a funding agency, Arghyam works primarily through partnerships – with government, NGOs and various types of institutions – for impact and scale. The emphasis of all that we do in Arghyam is on equity and sustainability. Addressing the issues of the poor and vulnerable in accessing water for their basic daily needs is a priority for us. Addressing these issues in a manner that is environmentally sustainable is important if the outcome is to be effective over time. We believe that the key to achieving this is in better water management which requires effective governance.

Specifically, Arghyam projects strive to understand and address issues of quantity, quality and access to domestic water in communities across the country. Some of the key principles which guide our efforts include the recognition of lifeline water as a basic need and right, decentralisation, community participation and ownership, an integrated approach to managing water from source to sink, an emphasis on subsidiarity (which means managing water locally) and effective use of technology as an enabler.

We work through a combination of project grants to grassroots organisations, knowledge building and sharing through the India Water Portal, promoting new models of water science, technology and system design, participatory action research and advocacy.

Arghyam now collaborates with a diverse range of actors across 18 states in India through 80 projects. Rigorous engagement with people and institutions has helped in deepening the internal debate and keeping Arghyam closely connected to the ground.

For more information, please visit:
www.arghyam.org
www.indiawaterportal.org
http://indiasanitationportal.org
http://schools.indiawaterportal.org