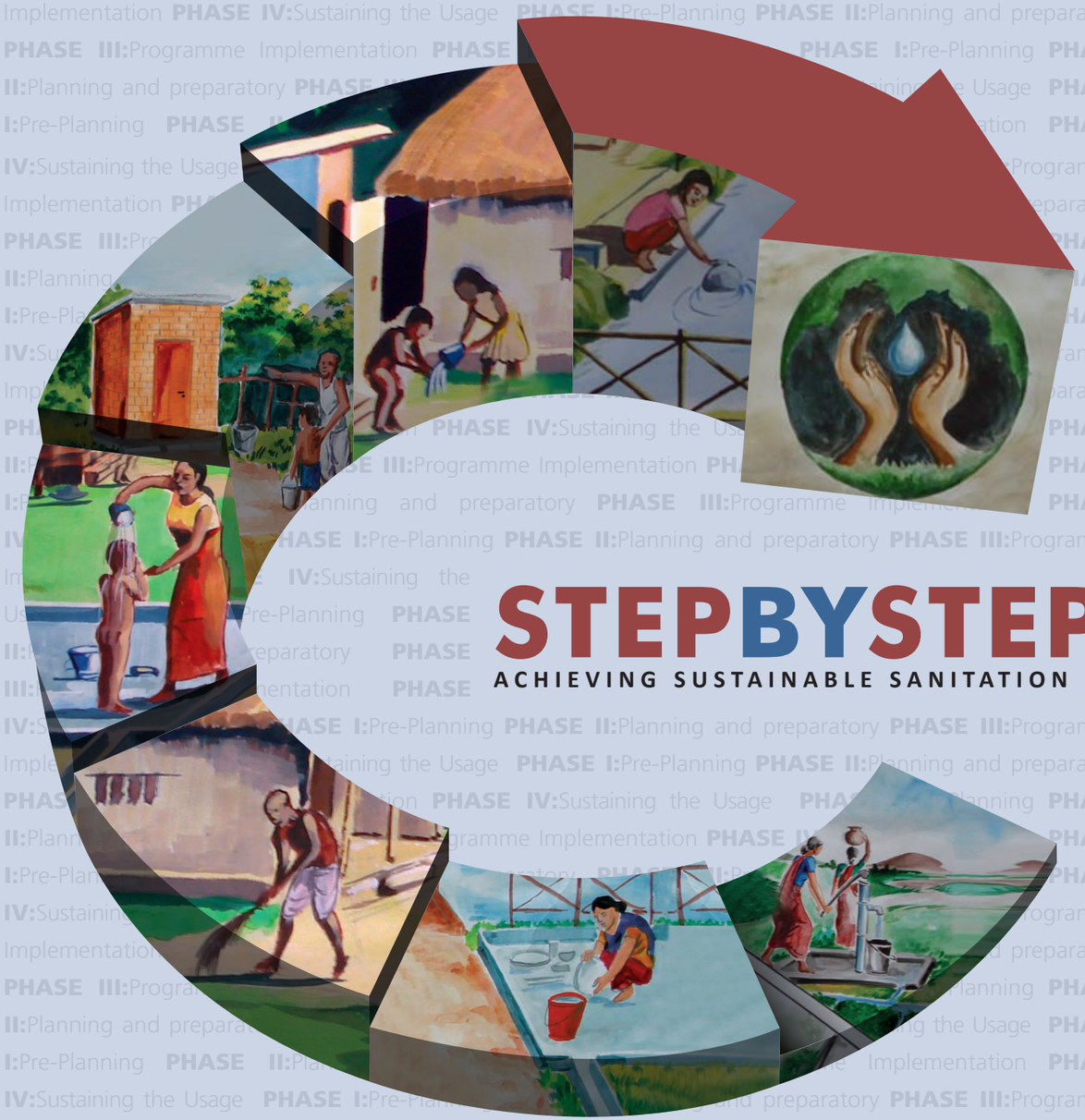
India has made considerable progress in sanitation since the launch of the Total Sanitation Campaign. However, concerns have been raised about its sustainability.

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.



STEPBYSTEP

ACHIEVING SUSTAINABLE SANITATION

ARGHYAM

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Arghyam
Safe, sustainable water for all

Lessons from civil society experiences

IMAGE 1: *Towards change: The journey begins with awareness*

Photo courtesy: *MYRADA*

First published by Arghyam (India), June 2010

AUTHOR
Suresh Babu S.V. on behalf of
the Communications & Advocacy Team

This document is a collaborative effort with WaterAid India, Gramalaya, Gram Vikas and MYKAPS. It is based on the collective experiences of other field and institutional partners.

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Contents

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Step by Step draws from the inputs and experiences of the following partner NGOs and is based on their community-centric approaches to sanitation in different parts of the country:

- Dharti Gramothan Evam Shabhagi Gramin Vikas Samiti, Morena, Madhya Pradesh
- Gramalaya, Tiruchirappalli, Tamil Nadu
- Gram Vikas, Orissa
- Lok Shakti Samiti, Chhattisgarh
- MYKAPS, H.D. Kote, Karnataka
- MYRADA, Kamasamudram, Karnataka
- Rural Education for Action and Liberation, Dindigul, Tamil Nadu
- Samarthan, Madhya Pradesh
- UTTHAN, Ahmedabad, Gujarat
- Youth Volunteer Union, Thoubal, Manipur
- Wangjing Women and Girls Society, Manipur

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Finally, I thank Sunita Nadhamuni, CEO, Arghyam, for her unwavering guidance, support and feedback. Sunita's idea to develop a template of processes, time and resources greatly enriched this document.

Preface

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

IMAGE 2: *Participatory approach: Together towards sustainability*

Photo courtesy: *Nelson Royal, Arghyam*

1 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*

Organisation	State	Programme Area
Dharti Gramothan Evam Shabhagi Gramin Vikas Samiti, Morena	Madhya Pradesh	108 villages in 30 panchayats: 750 toilets; low water table; flood-prone area
Gramalaya, Tiruchirappalli	Tamil Nadu	157 villages: 25,000 toilets; 90% usage
Gram Vikas	Orissa	700 villages in 21 districts: 44,697 households; 100% usage
Lok Shakti Samiti	Chhattisgarh	148 villages in 80 panchayats: 3,777 toilets; low water table
MYRADA, Kamasamudram	Karnataka	2 villages in Kolar district: 144 toilets
MYKAPS, H.D. Kote	Karnataka	25% of villages in the taluka: 10,000 toilets; 60% usage
REAL, Dindigul	Tamil Nadu	3 coastal and drought-prone districts: Ecosan
Samarthan, Sehore	Madhya Pradesh	94 villages: 700 toilets; 85% usage; low water table
Utthan, Ahmedabad	Gujarat	4 rocky, water-scarce districts

WaterAid's partners in the field. The template sought to capture the processes, timeframes, 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.

2 The Sanitation Drive in India

The Story so Far

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.

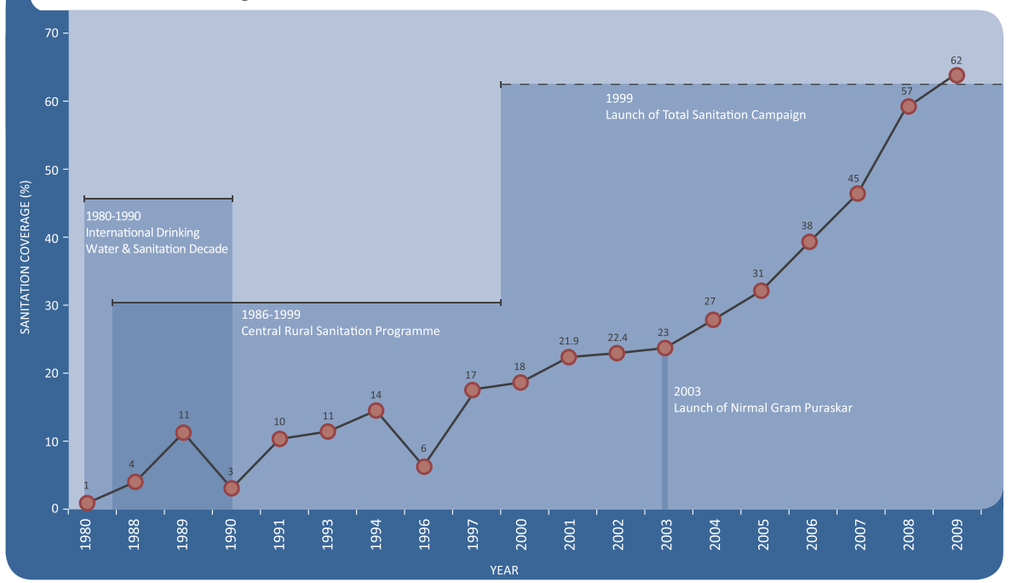
The Total Sanitation Campaign (TSC) launched by the GoI in 1999, envisages a shift from an infrastructure-focussed approach to one that promotes behaviour change. Among its objectives is the elimination of open defecation to minimise the risk of contaminating food and drinking water sources.

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.

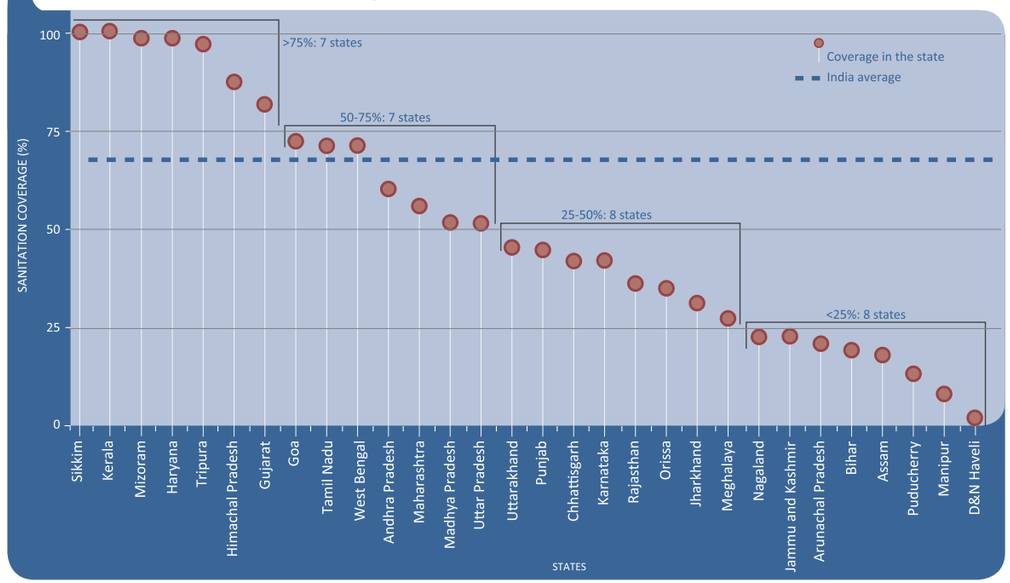
The Nirmal Gram Puraskar (NGP) introduced by the DDWS in 2003, recognises the role of GPs and local communities in achieving a community-wide open defecation-free status and clean village environment.

GRAPH 1: *Progress made in sanitation*



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

GRAPH 2: *Sanitation coverage across states in India*



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

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.

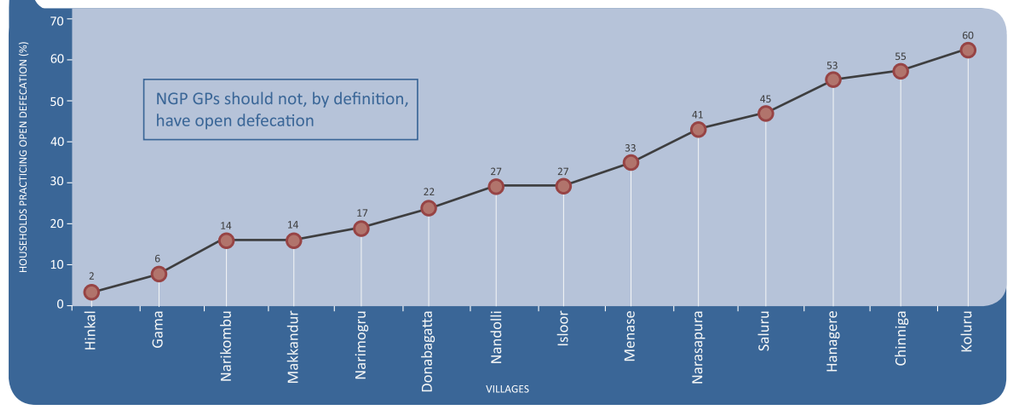
SLIPPAGES

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,

GRAPH 3: *NGP GPs in Karnataka reporting open defecation*



Source: *Anon 2009, A Survey of Household Water and Sanitation (ASHWAS), Arghyam, Bengaluru, July*

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

States	Population practicing open defecation (%)						Total GPs surveyed
	Zero	<20	20-40	40-60	60-80	>80	
Andhra Pradesh	0	5	4	1	0	0	10
Chhattisgarh	0	0	0	4	5	1	10
Maharashtra	6	36	4	6	7	1	60
Tamil Nadu	0	11	6	9	5	2	33
Uttar Pradesh	0	1	7	6	1	0	15
West Bengal	0	11	18	3	2	0	34
Total	6	64	39	29	20	4	162
Total (%)	4	40	24	18	12	2	100

Note: *Values represent number of GPs*
Source: *Anon 2008, Impact Assessment of the Nirmal Gram Puraskar-awarded Panchayats, UNICEF-TARU, New Delhi*

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"[1].

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

IMAGE 3: *All sides open, at the doorstep: An unusable toilet in Orissa*

Photo courtesy: *S Vishwanath, Arghyam*

3 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.

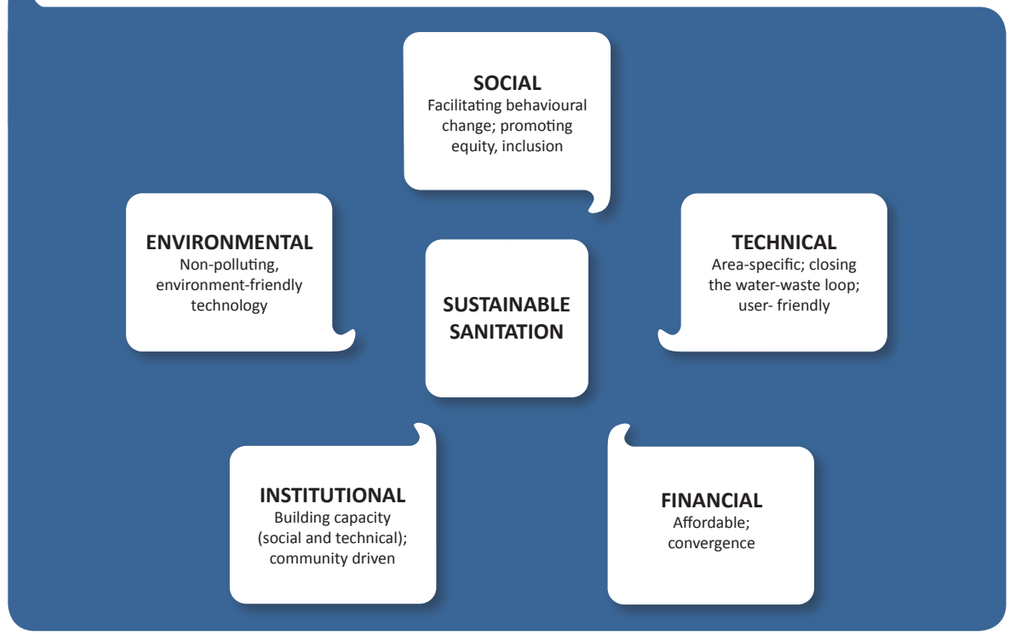
1. Social

- 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,

DIAGRAM 1: *Building blocks of sustainable sanitation*



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 Kamasamudram), 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 may be confirmed against two types of indicators: Essential or non-negotiable, and desirable or negotiable (Table 3).

Visual indications include the following:

- 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

TABLE 3: *Checklist for visual indicators of sustainable sanitation in a village*

	Parameters	Nature
a.	Free from open defecation leading to pollution of water sources	Essential
b.	100% coverage and usage of toilets	Essential
c.	Special provisions for the aged, specially abled, pregnant women	Essential
d.	100% sanitation in schools (separate toilets for girls and boys)	Essential
e.	Water supply available for toilets	Essential
f.	No additional burden of fetching water for toilets on women	Essential
g.	Well-maintained drainage system (unclogged drains, free of stagnant water, not polluting water sources)	Essential
h.	Treatment and reuse of grey water	Desirable
i.	Solid waste management systems (composting, etc); solid waste not creating litter or clogging drains	Essential
j.	High awareness of personal hygiene practices (hand-washing after defecation; handling drinking water with clean hands)	Essential
k.	Addresses issues of menstrual hygiene	Essential
l.	Availability of local capacity for O&M of sanitation system	Essential
m.	Capacity for biannual (indicative) water quality testing by the community, information dissemination, confirmatory tests and follow-up action	Essential
n.	Reduction in waterborne diseases; no deaths reported	Essential

- Village is willing to consider the conjunctive use of water from two water sources (groundwater, surface and/ or rain) for toilets
- High levels of hygiene (menstrual hygiene, hand-washing with soap after defecation, etc)
- Drains not clogged, malodorous or filled with sewage, stagnant water or litter
- Social systems to monitor usage and help the poor attain hygienic sanitation
- Local capacity for O&M of all hardware
- All drinking water sources pass the water quality test at least biannually
- No serious incidence of waterborne or water vector-borne diseases

IMAGE 4: *Sustainable sanitation through the eyes of a child*

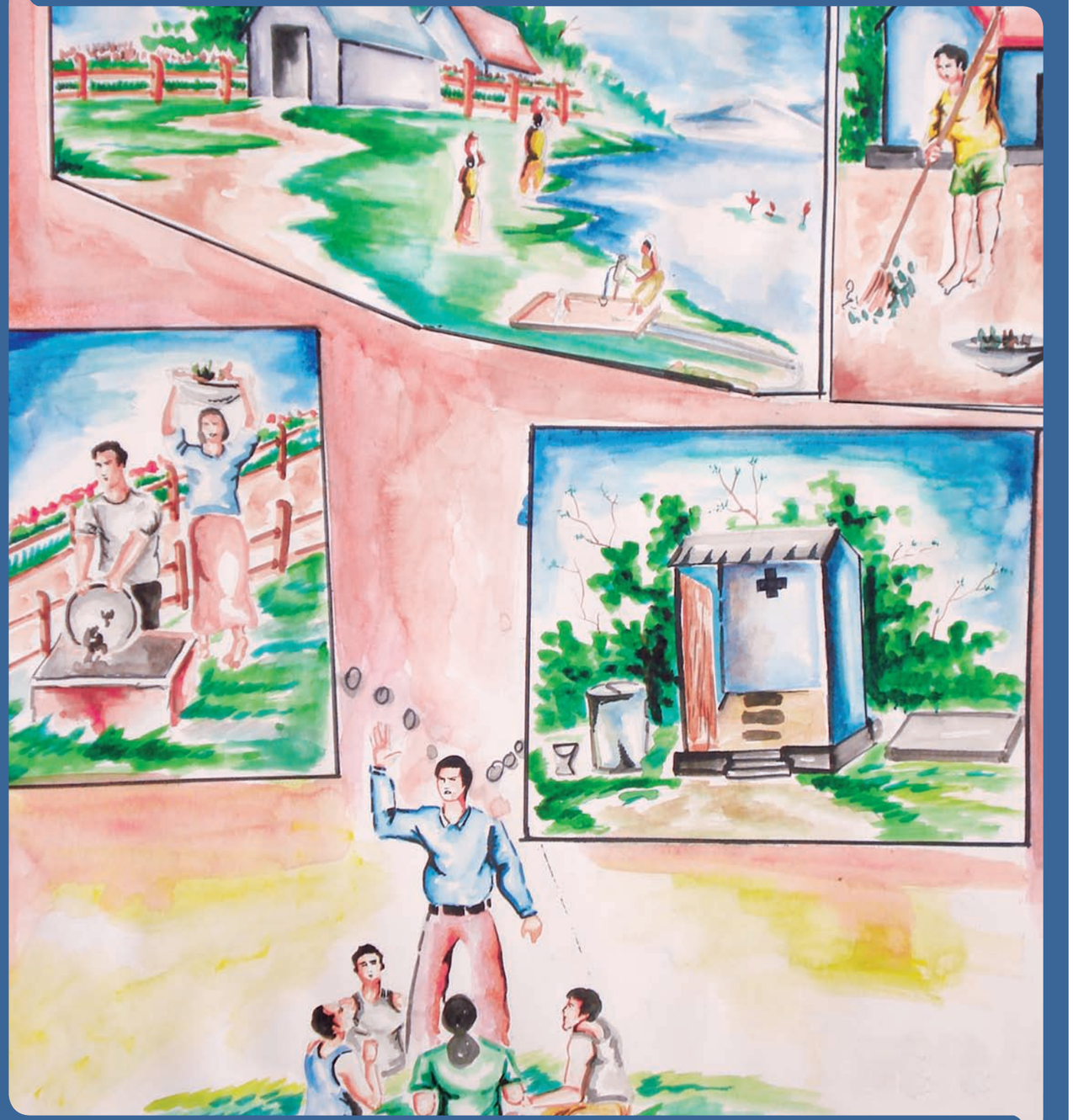


Photo courtesy: *Painting by Narendra Singh, Class X, Thoubal, Manipur*

4 Total Sanitation Campaign

Addressing Sustainability Challenges

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.

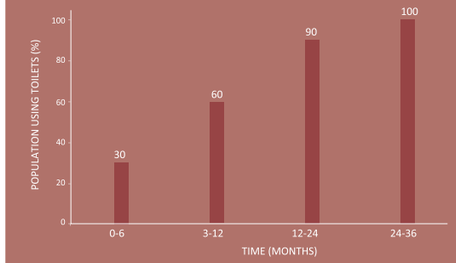
Stages of implementation

A sanitation campaign involves two broad stages:

- Stage I: 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

***BOX 1:** Gramalaya: Helping SHGs to help themselves*



***Graph:** From Open Defecation to Toilets – Timeline*
***Note:** Values as % population using toilets*

Gramalaya, an NGO working in over 158 villages in Tiruchirappalli district since 1987, maintains that it takes about five years to ensure the sustained use of toilets. The organisation's women's SHGs in the Thottiyam, Thathaiengarpet and Thuraiyur blocks of the district played a significant role in the success of the campaign. There are currently 1,951 such groups in its rural project areas and 649 in the urban slums of Tiruchirappalli City Corporation, formed with funding support from the Tamil Nadu Women's Development Corporation Ltd, Chennai. Gramalaya imparts training, such as income generation activities, as part of its support to the SHGs.

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.

***Source: J.** Geetha 2009, personal communications, August*

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 about behavioural change, as well as helping their communities to use and maintain the toilets properly in both cases.

According to MYKAPS, an organisation that is new to a programme area 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. 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.

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 GoI and

***BOX 2:** Gram Vikas' MANTRA for change*

Movement and Action Network for the Transformation of Rural Areas (MANTRA) is an integrated habitat development programme implemented by Gram Vikas. It is guided by the belief that all people have a right to a peaceful, dignified existence. Gram Vikas views water and sanitation as entry points to new programme areas, as well as a means to improved health and equitable inclusion in hierarchical caste- and gender-based communities.

Its intervention is contingent upon the consent and participation of each and every family in the village or habitation, ensuring that the benefits are shared equally, irrespective of sex, caste, creed or economic status. The onus of ensuring a complete consensus lies with the village; the programme is not initiated without it.

The programme begins with the formulation of individual family plans to raise an average amount of Rs 1,000 per family towards a village corpus fund. While the rich are required to subsidise the poor, even the poorest widow must contribute Rs 100. The fund, placed in a term deposit to earn interest, is only used to support new families that emerge as the village grows. This ensures 100 per cent coverage at all times and helps subsidise the cost of external construction materials.

The core values that drive this strategy are:

- Inclusion: The involvement of every household in the settlement is a non-negotiable condition of the programme. Every household must participate and benefit equitably from the development process.
- Social equity: Representing every section of the community in decision making irrespective of caste, creed etc
- Gender equity: Equal representation and participation of men and women in decision-making
- Sustainability: Development processes are based on sound environmental values and have built-in institutional and financial mechanisms for sustainability
- Cost sharing: Poor people can and will pay for beneficial development services but there are some social costs which society at large must meet

***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 a 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[2].

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

IMAGE 5: *Fuelling change*

A focussed group discussion

Exposure visit: Seeing is believing

Photo courtesy: *Manohar Rao, Arghyam; MYKAPS*

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

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 trigger 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*

2. Indira Khurana and Romit Sen 2008, Feeling the Pulse: A Study of Total Sanitation Campaign, *WaterAid, New Delhi*

DIAGRAM 2: *Human resource allocation, Gramalaya*

Note: *The Executive Director's salary is partly funded by the programme. One Cluster Coordinator covers 40 villages; a Health Educator covers 15 schools and villages. Annual increment in salary is 10 per cent*
Source: *J. Geetha 2009, personal communications, August*

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.

DIAGRAM 3: *Human resource allocation, Gram Vikas*

Note: *Human resources are indicated for 60 villages in the programme area. Salary indicated for Manager (monitoring) is partly supported by the programme. One Programme Coordinator covers 60 villages; one Supervisor covers five*
Source: *Joe Madiath 2009, personal communications, December*

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*

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

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

table, alluvial soil, hard rock, etc) and climatic (low temperatures) conditions. A blanket approach that fails to consider these factors leads to several problems. Among these is the refusal of the local community to adopt technical models that are indifferent to their needs. Improperly designed toilets can pollute water sources. Pit toilets, in shallow water table areas, are susceptible to flooding problems that render them unusable, resulting in the wastage of public funds. Another issue that must be addressed is the lack of a supply chain for the hardware requirements of toilet construction. Table 4 presents a matrix with technology options for various conditions and their corresponding costs. This information is based on the field experience of Arghyam, WaterAid and other 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 (Image 6). 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

IMAGE 6: *Toilet block in a common area, Mohapada, Maharashtra*

Photo courtesy: *Manohar Rao, Arghyam*

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)[3]. 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.

[3] Water supply in Gramalaya's programme area is partly funded by the Tamil Nadu Water Supply and Drainage Board (TWAD)

IMAGE 7: *Water for toilets: Different approaches*

Gramalaya: Ecosan toilet with bathroom

Gram Vikas: 'Houses of dignity'

MYKAPS: Harvested rainwater for sanitation needs

Photo courtesy: *Gramalaya, Gram Vikas, Arghyam*

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 up".

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.

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

Bamboo frame

Frame with cement mortar

Completed superstructure

Photo courtesy: *Amitangshu Acharya, Arghyam*

[4] L. Peter 2009, presentation on ecological sanitation, Bengaluru

IMAGE 9: *Innovations in superstructure*

Gramalaya: Hollow block brick

WWAGS: Bamboo and hay

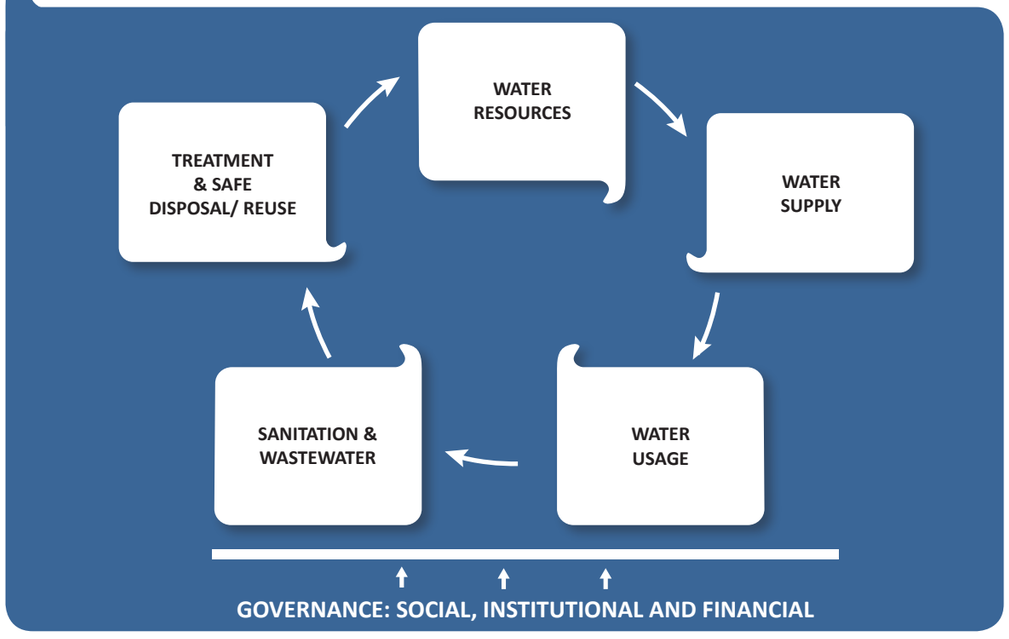
Gramalaya: Low cost slab for a toilet with bathroom

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

IMAGE 10: *Low cost ferrocement superstructure: Gramalaya*

Photo courtesy: *Amrtha Kasturi Rangan, Arghyam*

DIAGRAM 4: *Integrating water, sanitation and governance*



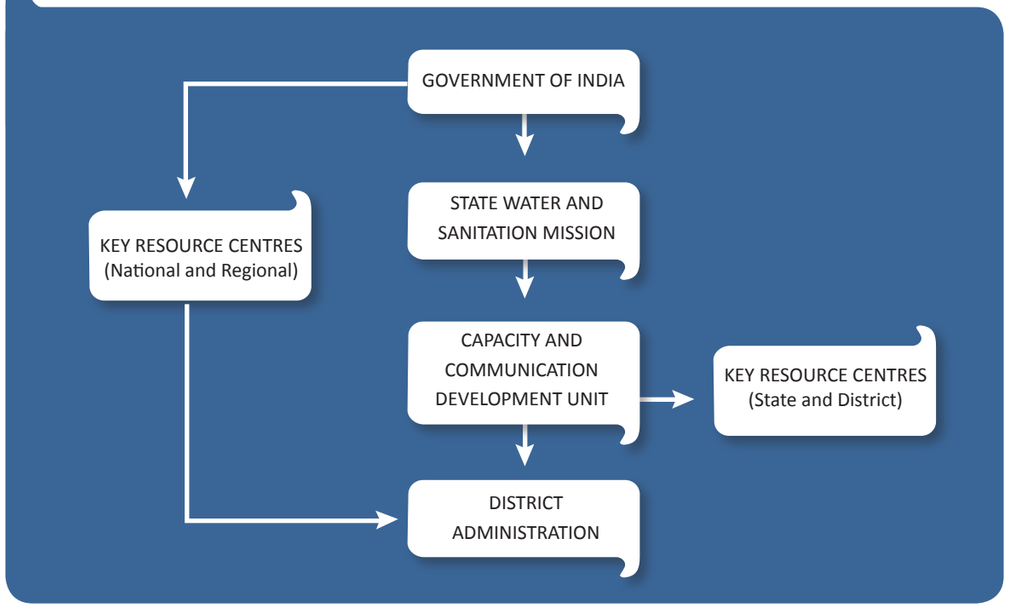
1. Integrated Planning

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.

DIAGRAM 5: *CCDU: Organisational structure*



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

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

TABLE 5: *Incentive structure, TSC*

Model	Contribution (% total cost)					
	GoI		State		Household	
	BPL	APL	BPL	APL	BPL	APL
Model 1: <Rs 1,500 (including superstructure)	60	0	20	0	20	100
Model 2: Rs 1,500-2,000	30	0	30	0	40	100
>Rs 2,000	0	0	0	0	100	100

Note: *Incentives revised to Rs 2,200; revised structure not available*
Source: *TSC guidelines 2007, Department of Drinking Water Supply, Government of India*

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.

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. The 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

BOX 4: *Civil society initiatives in capacity-building*

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, 2009, 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

IMAGE 11: *Driving financial inclusion: SHGs, Tiruchirappalli*

Photo courtesy: *Abigail Brown, Arghyam*

structure for hardware costs also ignores the diversity of Indian conditions.

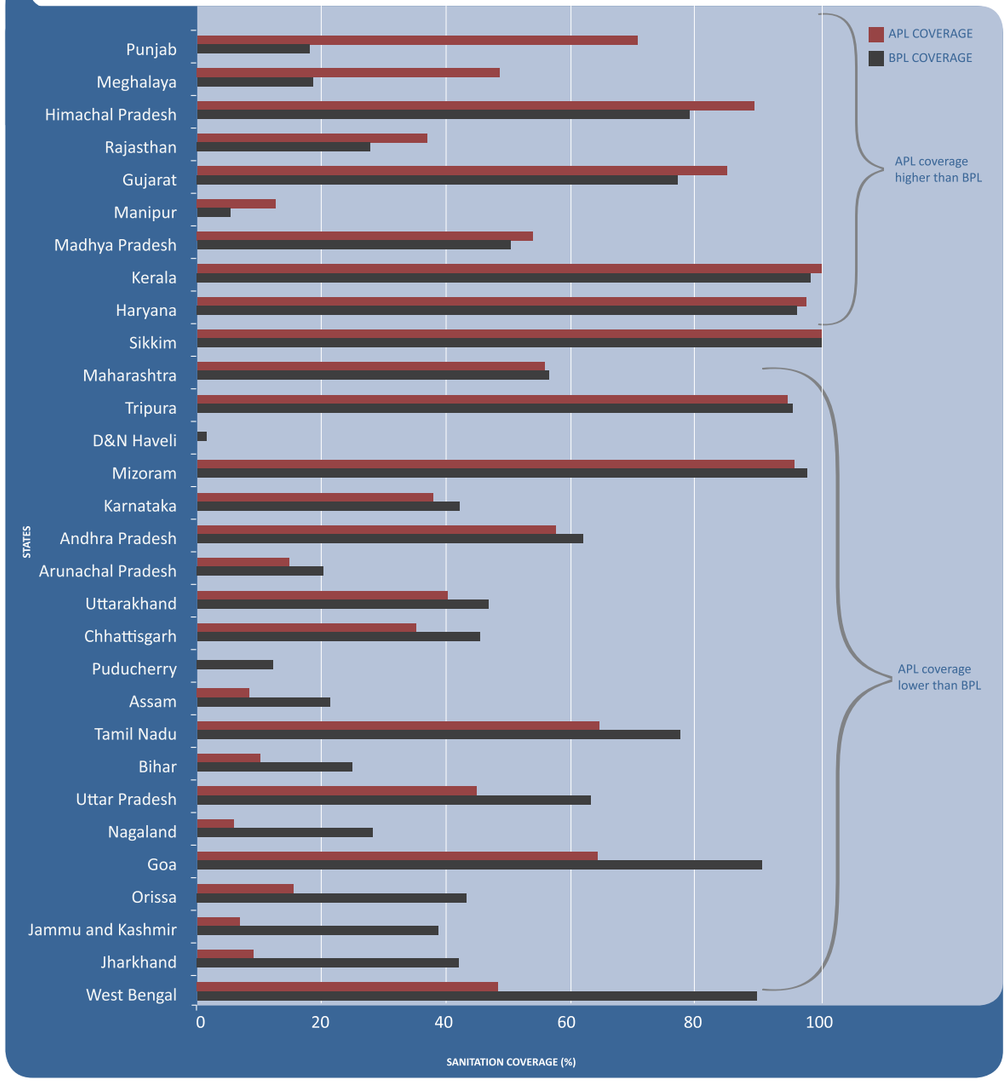
It offers, for instance, an incentive of Rs 2,200 to below poverty line (BPL) households for the construction of toilets, whereas the cost of sustainable options ranges from Rs 3,000 to Rs 12,000 (Table 4). This is a clear indication that TSC figures must be reassessed.

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 1,500 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).

GRAPH 4: *Toilet coverage across APL, BPL categories*



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

***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 2,800 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 non-governmental organisations (NGOs) support Self Help Groups (SHGs) and the community to 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

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.

***IMAGE 12:** Building capacity: A sanitation training institute*

***Photo courtesy:** Abigail Brown, Arghyam*

IMAGE 13: *Bringing smiles: Sanitation for a better life*

Photo courtesy: *Amitangshu Acharya, Arghyam*

5 Sustainable Sanitation

What does it take?

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 watsan in the programme area: The socio-economic context, status of water supply 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*

Step 1: Raising the superstructure

Step 2: Twin chambers

Step 3: Plumbing to separate excreta and urine

Step 4: Ready to be fitted with the slab

Step 5: Pans fitted over the chambers

Step 6: Ready to use: A proud owner

Photo courtesy: *Nelson Royal, Arghyam; YVU*

as leverage funds) and the MGNREGA (from where the labour component may be sourced)
- Establishing manpower requirements for mobilisation and implementation; allocating resources to train personnel to undertake software and hardware activities
- Initiating select software activities, such as IEC, training, etc
- Establishing RSMs (in the case of government-driven programmes) depending on the scale (district, taluka or village) of the operation or establishing linkages with existing RSMs (in the case of community based campaigns) to ensure a steady supply of construction material

3. Phase III: Implementation

Beginning around the sixth month after the initiation of the campaign, implementation represents the most active part of the campaign. It can extend from three to six years, depending on local conditions.

- Selecting sites; choosing between community and individual toilets; mobilising funds and materials
- Selecting construction vendors or training local masons to undertake construction
- Overseeing the quality of construction, as this will determine the life and usability of the toilets. Constant supervision and rigorous quality control form an important part of this phase. Many organisations introduce social audits to monitor implementation and its quality
- Continuing with software activities to create demand. O&M training programmes run parallel
- Devising and applying strategies to help village level institutions to develop and manage the O&M fund

4. Phase IV: Sustaining Usage: O&M and Governance

This phase begins around the sixth month or as soon as the toilets are constructed. It remains an ongoing process.

- Imparting hygiene education and training on O&M; emphasising the importance of safe disposal of solid and liquid waste; safely reusing composted excreta from ecosan toilets, etc. Some civil society groups make social audits mandatory during this phase
- Civil society groups work with PRIs and the community to create an inventory of individual and community toilets which acts as a ready reference later in the campaign
- Setting up community systems to ensure that the toilets remain in use. This is usually done with the support and inputs of resource persons from area, block or district groups

B. PHASE-WISE ACTIVITIES

Each phase involves a series of planning and implementation activities. Table 6 presents a checklist of activities wherein each column represents a phase. Activities relevant to each phase are categorised under social, technical, financial and institutional heads, as described below:

- Social: Mobilisation, participatory planning and software activities (IEC, etc)
- Technical: Baseline studies; technical models; participatory planning; management information systems and material flow management; construction; monitoring; O&M; post-project strategy
- Financial: Financial models; funding options; fund/ cash flow management; O&M funding
- Institutional: Formation of CBOs; strengthening existing CBOs/ GPs; convergence; monitoring mechanisms/ social audits; governance
- Planning: As all the categories listed above involve planning, these have been depicted separately

C. TIMEFRAMES

The timeframes shown in the matrix above are indicative. Field campaigns indicate that achieving

TABLE 6: *Phase-wise activity checklist*

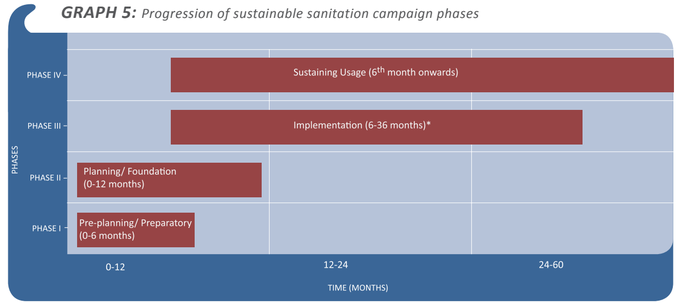
PHASE I Pre-planning/ Preparatory | 0-6 months	PHASE II Planning/ Foundation | 0-12 months	PHASE III Implementation | 6-36 months (could extend to 60 months depending on the progress in behavioural change)	PHASE IV Sustaining Usage: O&M and Governance | Month 6 onwards (right from the time toilets are constructed and put into use)
Social Mobilisation: Entry point activities; convening gram sabha to discuss the programme; identifying existing CBOs/ forming new CBOs.	**Social Mobilisation:** Raising awareness, creating demand, etc	**Social Mobilisation:** Creating demand; building awareness about O&M; sustaining usage	**Social Mobilisation:** Building awareness about O&M; sustaining usage
Software Activities: IEC; exposure visits; hygiene education; identifying training needs (school sanitation, menstrual hygiene, etc) and resources	**Software Activities:** IEC; exposure visits; hygiene education; preparing communication plans and training modules (school sanitation, menstrual hygiene, etc) for staff, facilitators, teachers, masons	**Software Activities:** Hygiene education; conducting training programmes (O&M, wastewater disposal, reuse, school sanitation)	**Software Activities:** Hygiene education, including menstrual hygiene; training (O&M, emptying pits, waste disposal, reuse of composted excreta from ecosan); raising awareness among school children
Institutional Process: Interacting with GPs, PRIs, SHGs, etc; setting up community monitoring systems; triggering social mechanisms for behavioural change	**Institutional Process:** Strengthening institutions; forming watsan committees, area and district resource groups; exploring scope for convergence with GP funds, other government programmes, etc	**Institutional Process:** Initiating social audits/ community monitoring of construction, etc	**Institutional Process:** Community monitoring of construction, usage, etc; social pressures, triggers to prevent open defecation, disuse of toilets, etc; inventorising hardware created
Programme Area Identification: Based on demand or secondary research	**Participatory Planning:** Engaging with PRIs; focussed group discussions on plans; village mapping indicating defecation areas, waterlogged areas, solid/ liquid waste disposal points, etc	**Supply Chain:** Managing material flow for hardware requirements	**O&M:** Continuing O&M practices (cleaning toilets, emptying pits, maintaining wastewater disposal systems, etc)
Baseline Studies/ Need Assessment: Socio-economic, gender aspects; toilets; solid/ liquid waste management; school sanitation; vulnerable and special needs populations; menstrual hygiene and pregnancy	**Technical Evaluation and Finalisation:** Appraising models for toilets, water supply provisions, solid/ liquid waste management, school sanitation, vulnerable and special needs populations, menstrual hygiene; obtaining gram sabha approval	**Construction:** Individual, community and school toilets; water supply to toilets; solid/ liquid waste management systems	**Impact Monitoring:** Periodic and regular monitoring of socio-economic, health, groundwater impact; behavioural studies
Technical Inventorisation/ Literature Survey: Inventorising models for toilets, water supply provisions, solid/ liquid waste management, school sanitation, vulnerable and special needs populations, menstrual hygiene; O&M models	**Financial Evaluation and Finalisation:** Establishing linkages for funds; defining principles for allocating/ sharing costs; determining extent of community contributions	**Financial Management:** Managing flow of funds, community contributions	**End Line Surveys:** To assess the increase in awareness of sanitation and hygiene, number/ functionality of toilets, water supply connections, solid/ liquid waste management systems; extent of school sanitation achieved; extent of socio-economic-gender inclusion, etc
Inventorisation/ Literature Survey: Financial models (government, community contributions, SHGs, banks, other donors)	**HR:** Deploying manpower for hardware and software activities	**Reporting and Dissemination Systems:** Activating systems for public disclosure and accountability	
		O&M: Preparing and operationalising strategies and protocols	**Post-project Strategy:** Operationalising exit strategy; activating institutional arrangements to ensure sustainability
HR: Estimating manpower requirements for mobilisation and implementation	**Supply Chain:** Establishing linkages to ensure availability of hardware	**Post-project Strategy:** Preparing exit strategy, documentation; sharing experiences/ advocacy; institutional arrangements for post-implementation phase	
Management Information Systems: Planning	**Management Information Systems:** Operationalising systems	**Management Information System:** Feeding information into the system; reviewing updates	**Management Information System:** Continuing to feed information into the system; reviewing updates

SOCIAL TECHNICAL FINANCIAL INSTITUTIONAL PLANNING

Note: *Timelines and activities listed are indicative. For example, an organisation with prior experience in sanitation may select only the relevant activities. Need-based permutations and combinations may be tried out*

ACTIVITY CHECKLIST

GRAPH 5: *Progression of sustainable sanitation campaign phases*



**May take up to 60 months depending upon extent of demand*

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

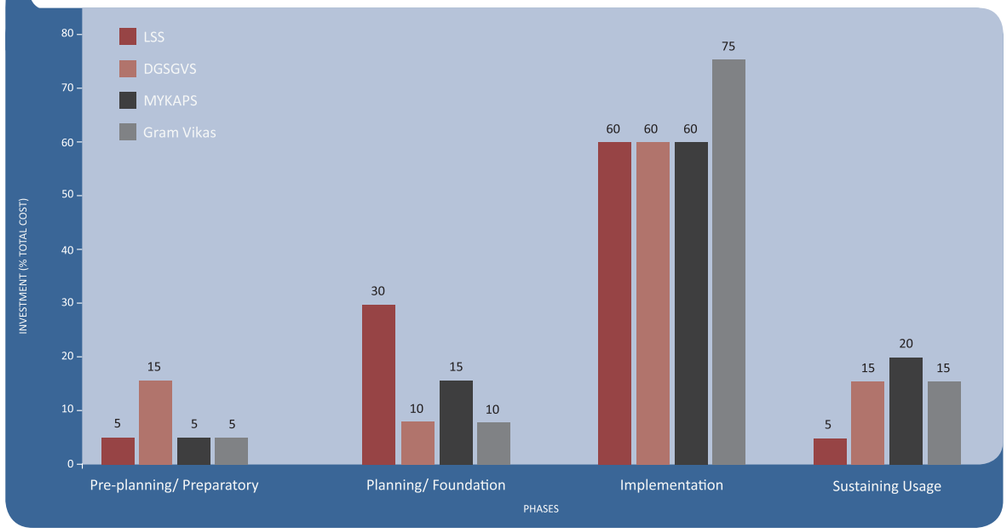
The ratio of the hardware to software cost is in the range of 10 per cent (Gramalaya) to 27 per cent (Gram Vikas). Ten per cent of Gramalaya's software allocation is spread over a period of five years (Graph 7). Unlike the government's current trend wherein IEC expenditure is incurred during the initial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

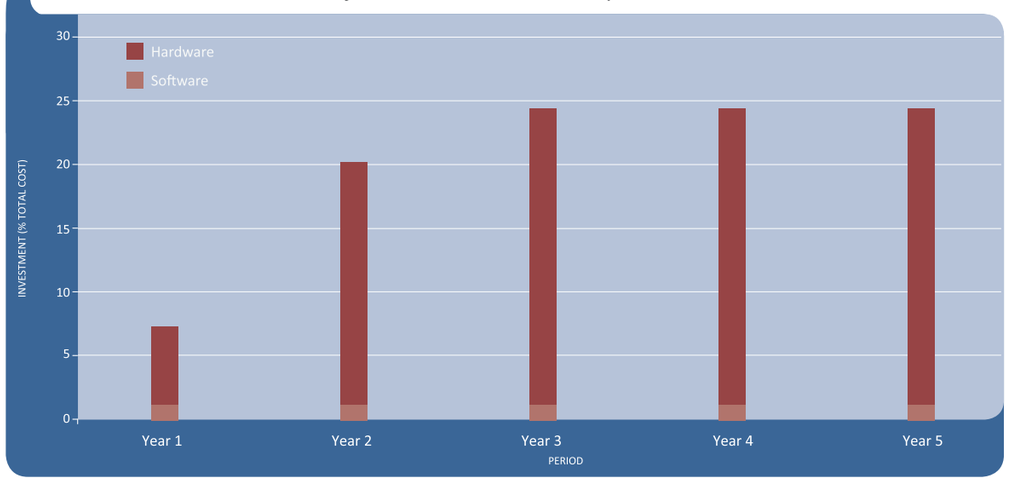
The four phases of a sanitation campaign deserve equal attention and careful fund allocation. As

GRAPH 6: *Trends in phase-wise investment*



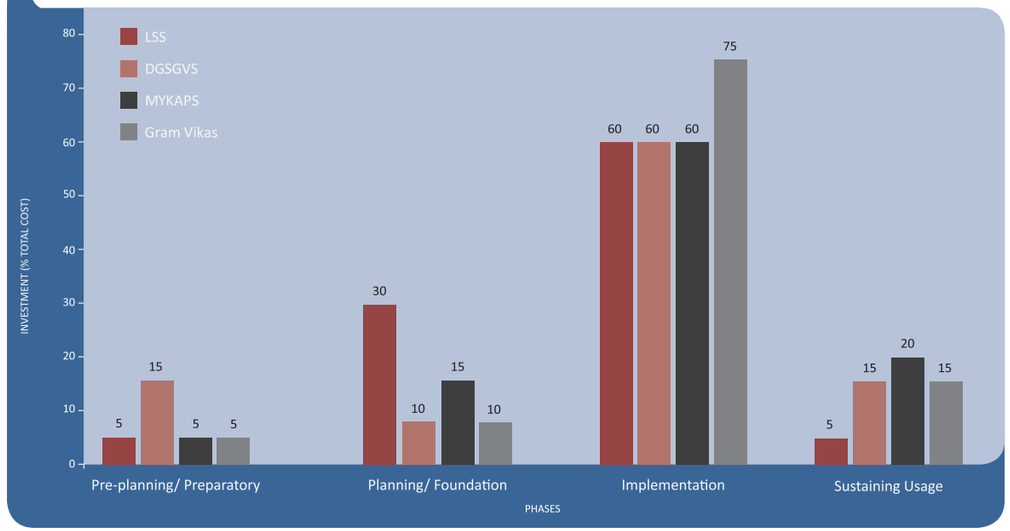
Source: *Arghyam and WaterAid partners 2009, personal communications, December*

GRAPH 7: *Hardware to software investment: Gramalaya*



Source: *Gramalaya 2009, personal communications, December*

GRAPH 8: *Trends in annual investment over campaign period*



Source: *Arghyam and WaterAid partners 2009, personal communications, December*

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 grassrouts 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.

- Pre-planning/ Foundation: 5-15%
- Planning/ Preparatory: 10-30%
- Implementation: 60-75%
- Sustaining Usage: 5-20%

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.

- First year: 7-20%
- Second year: 20-25%
- Third year: 25-30%
- Fourth year: 15-30%
- Fifth year: 10-24%

6 The Way Forward

Reflections on Future Action

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.

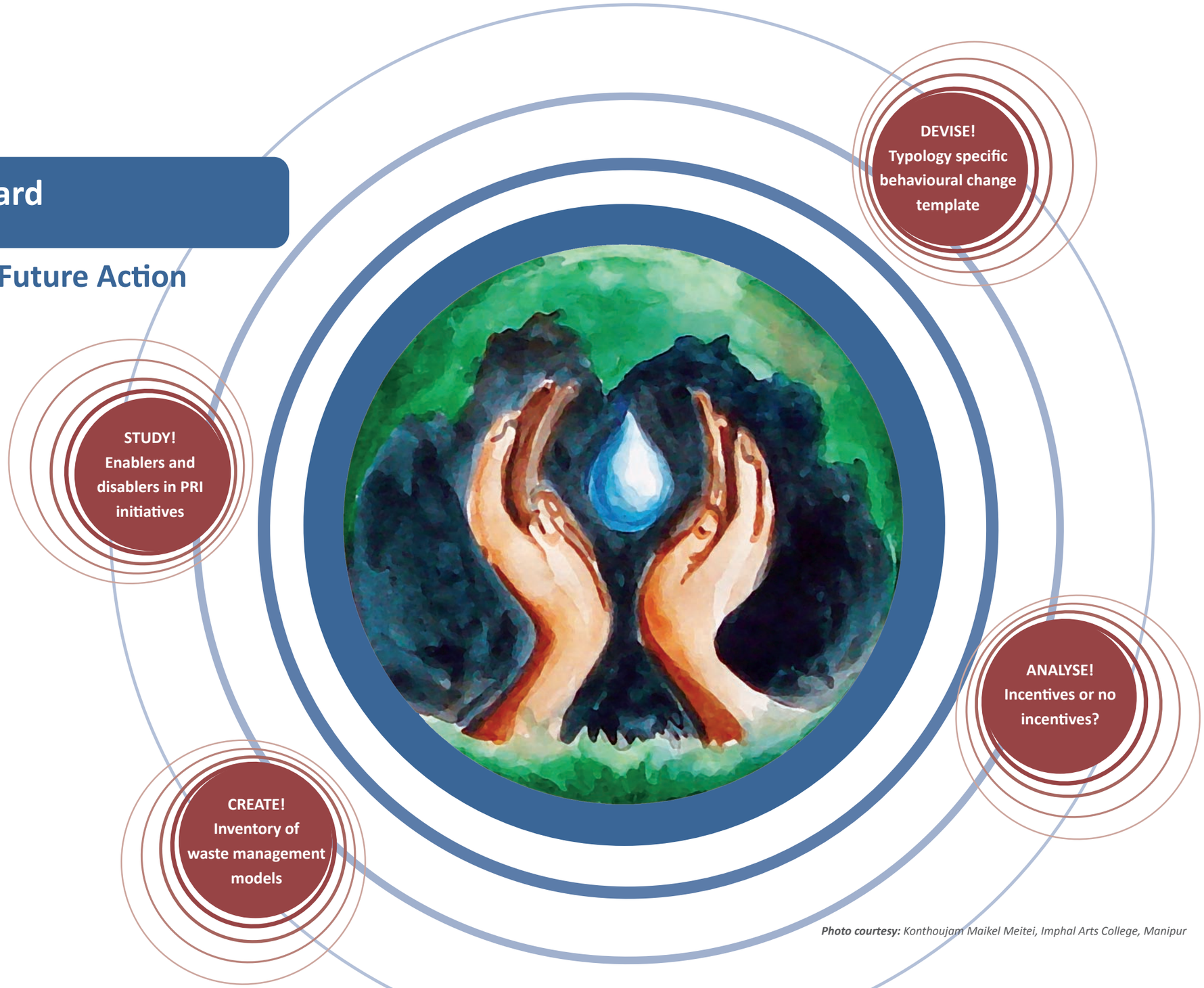


Photo courtesy: *Konthoujam Maikel Meitei, Imphal Arts College, Manipur*

Annexures

ANNEXURE 1: *Sanitation coverage, India*

State	IHHL BPL (%)	IHHL APL (%)	IHHL APL+BPL (%)	Sanitary Complex (%)	School Toilets (%)	Balwadi Toilets (%)
Andhra Pradesh	61.65	57.35	60.11	100	86.32	35.86
Arunachal Pradesh	20.32	14.67	19.88	10.06	87.40	66.61
Assam	21.33	8.38	16.88	1.90	50.51	20.73
Bihar	24.86	10.05	18.26	24.01	54.15	14.44
Chhattisgarh	45.24	34.97	39.71	23.46	91.75	75.22
Dadar & Nagar Haveli	1.49	0.00	1.49	8.33	0.00	0.00
Goa	90.50	63.98	74.47	0.00	61.01	10.60
Gujarat	76.96	84.72	80.81	100	100	94.36
Haryana	96.00	97.46	97.01	77.38	97.69	84.72
Himachal Pradesh	78.80	89.10	86.47	13.52	35.88	27.45
Jammu & Kashmir	38.56	6.78	21.41	49.39	48.04	7.02
Jharkhand	41.82	8.98	29.47	8.81	76.85	27.55
Karnataka	41.93	37.78	39.65	42.30	99.37	98.83
Kerala	98.19	100	100	72.84	93.92	65.44
Madhya Pradesh	50.15	53.78	52.12	39.18	88.17	100
Maharashtra	56.26	55.57	55.82	42.26	92.05	96.15
Manipur	5.29	12.57	7.18	27.20	37.13	13.24
Meghalaya	18.45	48.43	25.85	20.00	22.99	12.03
Mizoram	97.50	95.50	97.06	61.43	100	100
Nagaland	28.10	5.87	24.61	66.93	41.99	38.77
Orissa	43.17	15.30	33.01	3.06	84.44	69.70
Puducherry	12.17	0.00	12.17	0.00	0.00	100
Punjab	17.96	70.43	42.42	15.33	93.14	23.70
Rajasthan	27.77	36.68	34.18	22.99	73.46	41.13
Sikkim	100	100	100	100	100	100
Tamil Nadu	77.28	64.22	70.89	100	93.06	94.17
Tripura	95.22	94.30	95.02	71.68	86.96	76.31
Uttar Pradesh	62.96	44.72	52.03	98.38	89.85	72.57
Uttarakhand	46.52	40.00	43.25	11.28	57.63	18.43
West Bengal	89.42	48.10	70.85	47.37	45.65	28.59

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*

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

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. a. Sanitation

3.a.1. 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
- ☐ Cultural reasons
- ☐ Water scarcity
- ☐ 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)*
General population	☐	☐	☐	
Aged/ disabled person/ pregnant woman/ person with special needs	☐	☐	☐	

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 (only in case of shared toilet)
- ☐ Unequal contribution (own funds) from all families (only in case of shared toilet)
- ☐ 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
- ☐ <10 m

9. Do you use the toilet?
- ☐ Yes
- ☐ No

10. Do all the members in your family use the toilet?
- ☐ Yes
- ☐ No *(go to Q11)*

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
- ☐ Don't know how to use it
- ☐ Don't use while away at work
- ☐ Difficulties for the younger children/ aged to use it
- ☐ Other reasons including cultural and religious (specify)

13. If using a toilet, what problems, if any, do you face while using the toilet?
(Note: To be asked only of aged/ disabled/ pregnant person)
- ☐ 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
- ☐ Persuaded by GP representative
- ☐ Social pressure
- ☐ Others (specify) _____

16. What type of toilet do you have?[1]

☐ Pit latrine
☐ Ventilated improved pit latrine
☐ Flush
☐ Dry toilet
☐ Compost/ ecosan toilet

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 Toilets[3]

1. Why are you using a shared toilet?

☐ No money for a household toilet	☐ More convenient and hygienic than community toilets	☐ No space

[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

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

	General	**Aged/disabled person/pregnant woman**
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	**Washing clothes**	**Bathwater**	**Kitchen refuse**
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
☐ Partly clean
☐ Clean and well maintained

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 (encircle relevant code)

Illness	Adult	Infant (0-12 months)	Child (1-5 yrs)
Diarrhea/ dysentery [4]	1 2 3	1 2 3	1 2 3
Cholera	1 2 3	1 2 3	1 2 3
Typhoid	1 2 3	1 2 3	1 2 3
Gastroenteritis	1 2 3	1 2 3	1 2 3
Jaundice	1 2 3	1 2 3	1 2 3
Vector-borne diseases (dengue, chikungunya, malaria)	1 2 3	1 2 3	1 2 3
Other geogenic related illness (dental fluorosis etc)	1 2 3	1 2 3	1 2 3
Others (specify)	1 2 3	1 2 3	1 2 3
	1 2 3	1 2 3	1 2 3
	1 2 3	1 2 3	1 2 3

[4] The typical symptom of diarrhea is watery stool. In the case of dysentery, the stool is in the form of mucous, with blood and the patient suffers from cramping and fever

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
☐ Others (specify) _____

2. Handwashing (encircle relevant response)

1: No 2: Yes, only water 3: Yes, with soap 4: Yes, with ash/ soil

Do you wash your hands	Response
After defecation (or handling baby faeces)	1 2 3 4
Before cooking	1 2 3 4
Before eating	1 2 3 4
After handling pesticide	1 2 3 4

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?

	Cloth	Cotton *(go to Q6)*	Sanitary napkin *(go to Q7)*
Women	☐	☐	☐
Adolescent girls	☐	☐	☐

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 2-3 months
☐ Once in six months
☐ Once a year

5. Where do you dry the cloth?
- ☐ Out in the sun
- ☐ Inside the house
- ☐ Outside in the shade where nobody can see

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

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:

Symptoms	Women	Adolescent girls
Burning sensation while urinating	☐	☐
Urge to urinate frequently	☐	☐
White or cloudy urine, with or without blood	☐	☐
Thick white discharge, with or without odour	☐	☐
Digestion problems and acidity	☐	☐
Stomach cramps from controlling urination	☐	☐

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)

Lack of awareness on menstrual health	1	2
No toilet in school	1	2
Stopped school due to lack of toilet	1	2
Misses school to be able to collect water	1	2

3.e.2 Decision making

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

NOTES:

Arghyam: A profile

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 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