IRC

THE HAGUE, THE NETHERLANDS | 12 – 14 MARCH 2019

All systems go!

Positioning WASH services within a systems framework and demonstrating achievement of open defecation free status at scale - An example from the Indian State of Bihar

Paper for the WASH systems symposium

A. Asad Umar, B. Satviki Varma (India)

50 years of IRC.
WASH systems that transform lives.

© 2019, IRC

This paper was drafted by A. Asad Umar, B. Satviki Varma, for the All systems go! WASH systems symposium, The Hague, The Netherlands, 12-14 March 2019.

Cite this publication as follows Asad Umar A., Satviki Varma, B. 2019. Positioning WASH services within a systems framework and demonstrating achievement of open defecation status at scale - An example from the Indian State of Bihar (India)

For all proceedings of the All systems go! WASH systems symposium, please check https://www.ircwash.org/proceedings

We grant permission for individuals and organisations to share and adapt this material, in whole or in part, for noncommercial use, educational, scientific or development-related purposes, provided that the appropriate and full citation is given. This publication is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Netherlands License. View the terms of the license here: https://creativecommons.org/licenses/by-nc-sa/3.0/nl/deed.en

The Pusa block of Samastipur district in the Indian state of Bihar accounted for very low sanitation coverage of 16%. This was coupled with poor understanding of roles and responsibilities among government functionaries as well as a lack of knowledge on the benefits of safe sanitation among community members. The Aga Khan Development Network's Initiative demonstrated the impact of effective partnerships with government functionaries and communities to achieve open defecation free (ODF) status at scale. Adopting a systems approach of WASH services, which included strengthening institutional systems and service delivery models, while also introducing robust monitoring systems, the partnerships with key actors has demonstrated an improvement in sanitation access at scale. A key differentiator of the AKDN Sanitation programme is the introduction of mobile monitoring tool - AKVO Flow, which allows project teams to undertake real time tracking of household sanitation coverage as well as monitoring improvements in key hygiene behaviour over time. The key results of this programme have been to create ODF communities at scale and sustained hygiene behaviour.

Introduction

Despite rapid economic growth in Asia, serious health, nutrition and development gaps persist, including inadequate services and inequitable access in the water, sanitation and hygiene (WASH) sector (Cronin et al 2015). Improving and sustaining access to sustainable sanitation and hygiene has been one of the most pressing development challenges for India. However, in response to this challenge, the present Government of India launched a national programme - the Swachh Bharat Mission, or Clean India Mission, to create an open defecation free (ODF) India by 2019. Since the launch of the Swachh Bharat Mission in 2014, India's rural sanitation coverage has increased to 93%[1] primarily on account of strong political commitment and explicit national priority on achieving ODF status. Despite this impressive figure one of the most challenging tasks is to ensure ODF sustainability as within country responsibilities for service delivery have been increasingly de-centralised. In addition, it is often observed that the local bodies are unable to adequately cope with the additional responsibilities due to the paucity of human resources and a lack of awareness and capacity for managing WASH (Cronin et al. 2015). In 2015, to support the Government of India's flagship programme, Aga Khan Development Network (AKDN) led by Aga Khan Foundation (AKF) launched its Comprehensive Sanitation Initiative. The initiative is a five year programme aimed at facilitating access to improved sanitation and hygiene for over 700,000 people in six states. A key component of this initiative is generating demand for hygienic sanitation practices, thereby tackling age-old norms and transforming long-standing behaviour change that improves the quality of life.

Bihar is one of the key intervention states under the AKDN Comprehensive Sanitation Initiative. Aga Khan Development Network decided to partner with the government and community to achieve sustained sanitation access at scale. Under this partnership, AKDN has signed a memorandum of understanding (MOU) agreement with the Bihar State government to improve sanitation access in two districts. Since the key approach adopted under the Clean India Mission is to ensure ODF status at scale, the district administration and AKDN came together to demonstrate a system strengthening model to achieve sanitation coverage at scale. AKDN prioritised strong government leadership from district to village level; adequate human resources and manpower deployment; appropriate technology (economically, socially and culturally); efficient and effective utilisation of the district's financial resources; and robust monitoring and supervision by the government.

A large body of qualitative research points to the fact that, above and beyond demographic factors, social dynamics can influence the decision to build, and use, a latrine (Pattanayak et al. 2009; Jenkins & Curtis 2005; Shakya et al. 2014), therefore the major focus of the intervention has been to adopt community centred approaches to trigger collective community actions

Rationale

The Pusa block of Samastipur district records one of the lowest sanitation coverage in the country at 16%. Ranked 633 out of 678 districts in the country as per a recent ranking released by the Indian government, and counted among one of the poorest performing districts

[1] Data available from the Ministry of Drinking Water and Sanitation, Government of India: http://swachhbharatmission.gov.in/sbmcms/index.htm

in terms of sanitation coverage, the need for intervention was immense in Pusa. Indeed the low sanitation access, coupled with poor understanding of roles and responsibilities among government functionaries and community members, a lack of knowledge of effective strategies to achieve ODF status as well as a lack of knowledge about the benefits of safe sanitation among community members, were the primary reasons for intervening in the Pusa block. Cognizant that the goal was ambitious and challenging - close to 21,272 households needed access to toilets - a key strategy adopted by the district administration was to partner with the Aga Khan Development Network, which has successfully demonstrated participatory and scalable approaches in the past to improve sanitation coverage.

Objective

The objective of the AKDN Comprehensive Sanitation Initiative in Pusa Block is to demonstrate community-centred approaches to achieve ODF status. The specific objectives of the initiative are as follows:

- Increased access and use of sanitation facilities for all households in the Pusa block.
- Improved hygiene practices and behaviour among target communities.
- Empowered community institutions enabled to plan, prioritise, and promote sanitation in villages.
- Promoting inclusive approaches and gender mainstreaming to improve sanitation access.

The systems strengthening approach to achieve result at scale

It is widely acknowledged that many non-governmental and development organisations, recognise the importance of working closely with governments in sanitation and hygiene programmes to make impact at scale. In many countries, community-focused approaches are being embraced by governments as an alternative to traditional subsidy and enforcement-based approaches (Local Governance in Sanitation, GSF note 2017). Providing WASH services requires strong national and local systems to be in place and political leadership and public finance linked together as both are essential to providing universal access to WASH services (IRC Strategy Framework 2017-30).

To make a block open defecation free, requires a different implementation strategy which involves establishing partnerships at the district, block, and gram panchayat levels to ensure quality implementation since it is widely acknowledged that defecation behaviours are influenced by contexts and culture (Christensen et al. 2015; Srivastava 2014). With the objective of achieving block ODF status in Pusa, a strategy to demonstrate an integrated model that not only looks to strengthen the supply chain but also supports the empowerment of local village institutions, includes hygiene promotion and ensures water, sanitation and hygiene access at both household and school level was adopted

Strategy 1: Strengthening institutional systems and engaging political leadership to ensure their commitment towards achieving and sustaining ODF

The current AKDN intervention has showcased an approach of collaboration and partnership within government/civil society organisations and community level institutions, including engaging closely with the political leadership at the local level. District collector, the head of the district acting as champions for the programme, was a strategic resource for enhancing coordination, motivating staff, enlisting the support of other actors and even leveraging additional resources to achieve the objective. The district collector also mobilised staff from other departments to support field level efforts in carrying out awareness activities. The block support unit (BSU) for Pusa was constituted by the district, ably supported by AKDN. The BSU, headed by the block development officer, comprised of key officials from the district administration, with responsibility of specific gram panchayats (GPs) to ensure the GPs achieve ODF status. In this manner, all GPs of the Pusa block had a dedicated nodal officer in charge of the progress. Appointing a nodal officer for GPs did two things: it not only ensured that the entire district workforce was committed and involved in the campaign but also promoted downward accountability: issues regarding fund mobilisation, and disbursement, or other such related challenges were now resolved at the BSU level itself and did not have to be escalated to the district, reducing unnecessary delays.

AKDN also conducted sensitisation workshops for district water and sanitation committee (DWSC) members and block functionaries, and assisting them in the preparation of open defecation elimination plans. Teams also organised a block level convention of local village institution members on their roles and responsibilities with respect to sanitation promotion.

In addition to this, teams also assisted the districts in the finalisation of the annual implementation plans, and social and behaviour change communication plans to roll out several key capacity building initiatives around strengthening village water and sanitation committees, training a cadre of frontline health workers, and strengthening of block officials. This helped districts

to finalise their priorities around key initiatives required for achieving ODF status, and earmark and allocate appropriate funds for these initiatives.

Strategy 2: To strengthen service delivery models for achieving and sustaining ODF at scale, leading to strong sub-systems in the district that are at the level required to provide services to all

Under the agreed partnership model, AKDN brought its strength in community mobilisation, masons training and supply side strengthening to the table and built the capacity of the dedicated workforce to work on this campaign. Aga Khan Rural Support Programme recognised that two building blocks were absolutely critical to the success of this programme: building the capacity of a trained workforce or motivators who could become ambassadors of change, and empowering local village institutions and frontline health workers to take forward the task, guided by the belief that these local village institutions are a key stakeholder in the achievement of ODF villages. As a result, one of AKDN's first tasks was to organise a capacity building workshop for local Panchayat Raj Institution (PRI) members and district officials to develop a joint action plan. Intensive training on Community Led Total Sanitation (CLTS) was organised for block and district officials to build their capacity in undertaking this crucial sanitation action plan exercise, given that CLTS has been successful in many parts of the world (Pickering et al. 2015).

Discussions also took place on the roles and responsibilities of PRI and on the constitution of Nigrani Samitis- the ward level committees, comprising village members and community leaders which need to be established once the villages are declared ODF, to ensure there are no slippages and all households use the toilets that have been constructed. Disbursement of incentives has been one of the widely acknowledged and critical bottlenecks in the implementation of the sanitation programme following the completion and verification of toilet construction. In Pusa however things assumed a different pace. Swifter resolution of issues was made possible by regularising weekly review meetings chaired by the district magistrate - a conscious move by AKDN and the administration to ensure limited delays in implementation. Issues related to quality construction, fund disbursement and resolution of land disputes were all part of the fortnightly reviews.

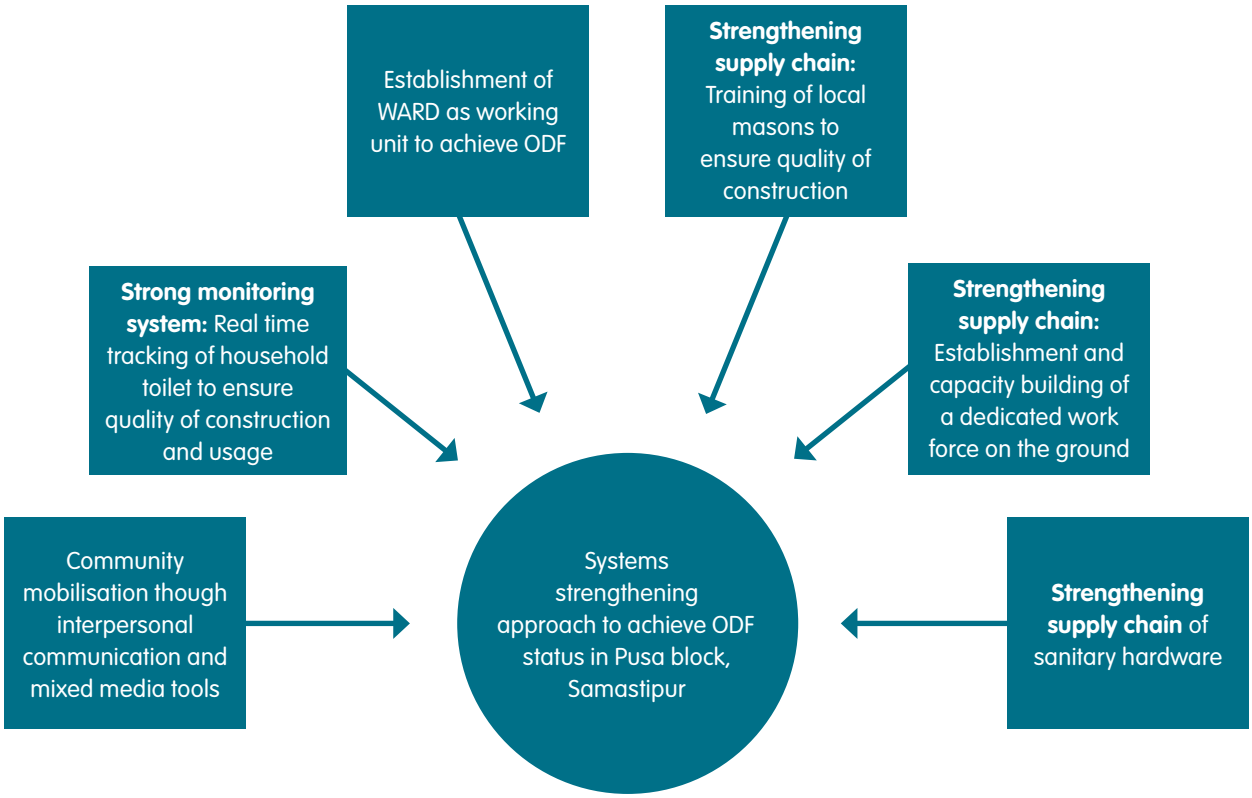
Recognising that Nigrani Samiti (village water and sanitation committees) were a critical institution, teams also conducted several trainings to strengthen their capacities. A system was established to train and ensure the deployment of Swachchagrahis and Nigrani Samiti members in villages.

While building awareness and demand for sanitation was important, it was equally important to ensure the availability of trained masons and good quality construction materials to cater to this demand. A backward calculation was undertaken at the consultative workshop to ascertain the number of trained masons needed to address the rapid demand for toilet construction. In order to facilitate and accelerate large-scale construction of good quality household toilets, the AKDN team conducted eight mason trainings, reaching out to over 250 masons. These trainings lent technical and theoretical expertise, and were conducted in batches of 40 masons over three days producing a cadre of skilled masons. To ensure that the increased demand does not lead to surge prices of construction materials, the project team with support from the district magistrate also facilitated a dialogue between local vendors such as concrete ring pit and door manufacturers and the district administration.

Other interventions included:

- District level CLTS training was organised to build the capacity of block and field officials to adopt participatory approaches of planning, implementation and follow up.
- To promote access and awareness of safe drinking water in the communities, AKDN established a mini drinking water laboratory in the Pusa block to develop the community's understanding of the need for safe drinking water as well as to develop a sense of ownership and practice to routinely maintain their drinking water sources.

Factors to achieve ODF status at block level



Community-led approaches are innovative methods for mobilising communities to eliminate open defecation. It targets a multitude of community-level sanitation behaviours aiming at collective action (Kar & Chambers 2008). It is widely acknowledged that defecation behaviours are influenced by contexts and culture (Christensen et al. 2015; Srivastava 2014).

The project focused on collective behaviour change to achieve result at scale. Project teams organised training for various stakeholders including teachers, students, self-help group members, women's groups, adolescent girls, mother's groups as well as youth forums. AKDN also actively involved and trained frontline health workers to undertake hygiene promotion. A range of communication tools such as puppetry, rallies, cleanliness drives, home visits, community meetings, morning follow up visits have immensely helped in collective actions and to ensure improved hygiene behaviour. Project teams also introduced contextualised communication materials for targeted behaviour change on personal hygiene, importance of toilet access, clean village environment and safe water handling practices.

Gender mainstreaming and inclusive approach: In addition to designing specific interventions for addressing the needs of women and girls vis-à-vis sanitation, health and hygiene, women's groups have also been actively involved in sensitisation efforts. AKDN has also introduced specific training modules to lend technical support to strengthen the implementation of menstrual hygiene management (MHM) initiatives at the district level. Building on this partnership, training and awareness sessions are organised with adolescent girls and self-help groups to strengthen knowledge and practice with respect to MHM. One of the key results of this programme to create ODF communities at scale has led to a series of direct and indirect impacts. By ensuring sanitation coverage at scale, anecdotal evidence suggests that sanitation access has particularly helped reduce the stress, indignity and safety concerns that accompanied open defecation among women. Women have also stated they now have more time to devote to income generation activities or household and childcare.

Strategy 3: Introduction of a robust monitoring system, leading to real time assessment of physical coverage

While applying this comprehensive approach, the key to success is to ensure that the implementers understand in real-time the community preferences, usage patterns, quality of infrastructure and pace of progress, to ensure the sustainability of sanitation coverage and usage at scale. However, it is a laborious process for large-scale

programmes to track the physical and functional status of toilets, as well as key behavioural indicators related to toilet usage and drinking water handling – both of which are critical factors underlying the sustainability of ODF communities.. The traditional, paper-based surveys are cumbersome and prone to high error rates. Lots of such data is often not readily available for sharing and further use.

The AKDN initiative sought to address this by introducing a cloud-based GPS-enabled tool named AKVO Flow. Using smart phones as the data collection device, AKVO Flow makes it possible to process large quantities of data to generate specific insights right down to the level of geo-referenced toilet units on both hardware and software aspects. This replaces guesstimates with robust predictions and presents this analyses on user-friendly dashboards to inform the decision makers.

Table 1– Key behaviour and socio-economic indicators using AKVO Flow

Key behaviour and socio-economic indicators	1. data as of 2/23/2017	2.data as of 9/1/2017
Knowledge and practice of key hygiene behaviour	32%	45%
Usage by elderly	98%	98%
Usage by persons with disabilities	98%	98%
Motivating factors for constructing toilets		
Convenience	13%	31%
Peer pressure	12%	2%
Safety	20%	21%
Health concerns	21%	16%
Correlation between economic category and technology		
Above poverty line: Double pit	44%	58%
Below poverty line: Double pit	85%	89%
Above poverty line: Septic	40%	38%
Below poverty line: Septic	12%	8%

Results

Today, the block has formally been declared ODF and the focus is now on ensuring these efforts are sustained, people continue to use facilities and adopt hygienic behaviours. One of the key objectives of the programme was to increase sanitation access and coverage at scale. Through collective efforts, this has now been achieved and all 21,272 households in the Pusa block have access to household toilets. Data also reveals the impact of sustained behavioural change and hygiene promotion efforts. The table above demonstrates improvements in key hygiene behaviours such as knowledge in handwashing and water storage practices from 32% to 45% over the project period.While the intervention has focused on universal access, it has adopted inclusive approaches to prioritise the needs of the most marginalised categories of potential users, therefore bridging the gaps in access to and use of appropriate sanitation and hygiene services for people with disabilities, the elderly and children under five. Data informs us of the high rates of usage by both elderly and people with disabilities: out of 641 differently abled members and 2134 elderly members surveyed, 98% of respondents were accessing the facilities. The high percentage of usage by vulnerable groups clearly reflects the adherence to quality and construction standards by the field teams.

Strategy 4: Layering on a strong school-focused hygiene education programme

Achieving the Water, Sanitation and Hygiene (WASH) SDG 6 is possible but profoundly challenging. Once infrastructure is built, it is important to ensure sustained usage and adoption of hygiene behaviours to sustain health impacts.

Recognising that the presence of facilities alone will not support improvements in hygiene behaviours, the AKDN team has also initiated a programme in schools, where through the active involvement of teachers, students and the wider community it ensures regular hygiene promotion classes are conducted and children become ambassadors of change in their communities.

Conclusion

There are opportunities for development partners to play a greater role in the sanitation sector and to work in partnership with other actors including utilities and government agencies to ensure both hardware and software components of sanitation are built in to project design and delivery to maximise community benefits and ensure longer term system sustainability (N. Carrard 2009). Similarly in this case one of the chief reasons for the success of the programme has been the robust partnership between the governments, civil society actors, local community-based organisations and empowered local village institutions. A key learning of the programme has been to empower local village institutions and evidence the key role played by key

government officials. Taking note of the key role played by local institutions and government officials, the Indian state governments recognised the importance of empowering local institutions to promote community-based action for sanitation and hygiene. This was done by incentivising communities once ODF status is achieved. That has led to collective community action to achieve ODF status, an approach that resonates with research affirming participatory, collective efforts of people have resulted in positive changes at community level (Akter & Ali 2014; Bisung et al. 2015; Sigler et al. 2015; Hetherington et al. 2017).

The programme also showcased the key role played by women led self-help groups (SHG) in motivating behavioural change at the grassroot level and its impact on a community led sanitation programme. With over 21,000 households that needed to construct household toilets within a set time frame, and in recognition of the need to ensure the same quality and intensity of messaging in all 13 gram panchayats (local governments at the village level), the programme successfully leveraged the platform of women self-help groups to undertake sanitation messaging. Owing to their personal experiences, the SHG members were strongly committed to spreading the message of hygiene and sanitation and became key voices on the ground. Regular household visits to explain the negative impacts of open defecation on health, encouraged their fellow community members to construct household toilets and also suggested ways in which they could accumulate funds for the construction.

Another key lesson under the initiative was to introduce a robust, mobile based monitoring system to improve implementation and track sustainability. Data collected through the mobile tool Akvo Flow was reviewed at a weekly meeting chaired by the district collector, which ensured objectivity and timely feedback on the quality of implementation.

The sanitation programme in India has made huge strides since 2015. However, progress continues to be inconsistent across geographies, especially in geographies characterised by dense population, high water table conditions and vulnerable sections. This programme has successfully demonstrated that in such difficult terrains, it is the coming together of key stakeholders such as government officials, local village institutions, women's groups, and the facilitation by external players, can improve sanitation coverage at scale, and make a difference to the national campaign, helping India meet its commitment to Sustainable Development Goal 6.

Acknowledgements

The authors would like to extend thanks to the communities, AKDN project teams in Bihar and senior management at the Aga Khan Foundation Delhi office. The contribution of Ms. Nadia Mathani, a Fellow with AKF India in analysing the AKVO data is sincerely acknowledged.

References

- Jenkins, M.W. & Curtis, V., 2005. Achieving the "good life": Why some people want latrines in rural Benin. Social Science and Medicine, 61(11), pp.2446–2459.
- Pattanayak, S.K. et al., 2009. Shame or subsidy revisited: Social mobilization for sanitation in Orissa, India. Bulletin of the World Health Organization, 87(8), pp.580–587.
- Shakya, H.B., Christakis, N.A. & Fowler, J.H., 2014. Association Between Social Network Communities and Health Behavior: An Observational Sociocentric Network Study of Latrine Ownership in Rural India. American Journal of Public Health, 104(5).
- Kar, K. & Chambers, R., 2008. Handbook on Community-Led Total Sanitation, Available at:
- http://www.communityledtotalsanitation.org/sites/communityledtotalsanitation.org/files/cltshandbook.pdf.
- Aidan A. Cronin*, Chander Badloe, Harriet Torlesse and Robin K. Nandy., 2015 Water, Sanitation and Hygiene: Moving the Policy Agenda Forward in the Post-2015 Asia. Asia & the Pacific Policy Studies, vol. 2, no. 2, pp. 227–233
- Ministry of Drinking Water and Sanitation –India, 2018. http://sbm.gov.in/sbmdashboard/Default.aspx
- Christensen, G. et al., 2015. Pilot cluster randomized controlled trials to evaluate adoption of water, sanitation, and hygiene interventions and their combination in rural western Kenya. American Journal of Tropical Medicine and Hygiene, 92(2), pp.437–447.
- Pickering, A.J. et al., 2015. Effect of a community-led sanitation intervention on child diarrhoea and child growth in rural Mali: A cluster-randomised controlled trial. The Lancet Global Health, 3(11), pp.e701 e711
- Akter, T. & Ali, A.M., 2014. Factors influencing knowledge and practice of hygiene in Water, Sanitation and Hygiene (WASH) programme areas of Bangladesh Rural Advancement Committee. The international Electronic Journal of Rural and Remote Health Research, Education, Practice and Policy, pp.1–10.
- Carrard, N., Pedi, D., et al., 2009. Non-government organisation engagement in the sanitation sector: opportunities to maximise benefits, Water Science & Technology, Volume 60, Issue 12 : 3109-3119. https://doi.org/10.2166/wst.2009.744
- Moriarty, P., 2017. IRC Global Strategy Framework (2017-2030) https://www.ircwash.org/strategy-framework-2017-30

- Rognerund, I. et al., 2016. Systems strengthening approaches to WASH services.
- Matt Guttentag ,2017 Three key insights into WASH Systems Approaches, Blog Post, based in insights from a January 2017 workshop on sustainable WASH in Addis Ababa, Ethiopia, with SWS partners , http://linclocal.org/2017/01/31/
- World Bank , 2017 .Sustainability Assessment of Rural Water Supply Delivery Model: A multi-country review, https://openknowledge.worldbank.org

Notes

Block is a development and mid-tier administrative unit in rural settings of India. Within a block there are a number of gram panchayats and on average the population of one block ranges between 125,000 to 200,000. Gram panchayat is the lowest tier of administrative unit in rural India.

Keywords

WASH, CLTS, SBM, AKDN, SDG, ODF.

Contact details

Name of principal author: Asad Umar
Address: Aga Khan Foundation (India)
Sarojini House, 6 Bhagwan Dass Road, 110001
Tel: +91-11-47399716
Email: asad.umar@akdn.org
www.akdn.org

Name of second author: Satviki Varma
Address: Aga Khan Foundation (India)
Sarojini House, 6 Bhagwan Dass Road, 110001
Tel: +91-11-47399716
Email: Satviki.varma@akdn.org
www.akdn.org

50 years of IRC.
WASH systems that transform lives.