



Request for Qualifications: Impact evaluations of rapid, low-cost interventions to promote latrine use in rural India

Promoting Latrine Use in Rural India Thematic Window

Issue date: 16 August 2016

Deadline: 18:00 Indian Standard Time (IST), 27 September 2016

1. Overview

The [International Initiative for Impact Evaluation \(3ie\)](#), in collaboration with the [Research Institute for Compassionate Economics \(r.i.c.e.\)](#), requests research or evaluation organisations or consortia to submit qualifications for a preparation grant, under 3ie's Promoting Latrine Use in Rural India Thematic Window. The aim of this thematic window is to support the design and evaluation of low-cost, innovative interventions to promote latrine use in rural India.

3ie promotes theory-based, mixed-methods impact evaluations that use counterfactuals (based on experimental or quasi-experimental methods) to identify and measure attributable change along the full programme causal pathway to answer questions about what works, for whom, how and at what cost.

3ie's Promoting Latrine Use in Rural India Thematic Window will support the design and implementation of rapid impact evaluations of interventions that indicate, in the first phase of the grant, a high potential to increase latrine use in rural India. This new thematic window will support studies that apply insights from behavioural science in order to address supply or demand factors influencing latrine use. This window aims to generate evidence on the design and implementation of context-specific, low-cost interventions that can be implemented and scaled-up with the resources available through the Government of India's current national sanitation programme, *Swachh Bharat Mission* (SBM; Clean India Mission) and/or any voluntary household contributions. The results of the 3ie-supported impact evaluations are expected to inform SBM before its conclusion on 2 October 2019.

The geographical scope of this thematic window is limited to rural India. The interventions may be implemented in SBM-covered villages or in areas where similar programmes have been implemented. Research teams must include at least one principal investigator (PI) who is an Indian national and resident in India.

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The Bill & Melinda Gates Foundation has provided funding support of US\$1.74 million for the grant window. This funding will cover the cost of eight preparation grants and five full impact evaluations.

Grants under this window will be awarded in two phases. The first phase begins with this request for qualifications (RFQ). Qualifications will be reviewed and scored by two internal reviewers and at least one external reviewer. Subsequently, eight research teams will be awarded preparation grants of US\$30,000 each for conducting formative work and preparing an impact evaluation proposal over three months. During this phase, grantees are expected to build relationships with the implementing agency and other key stakeholders working in rural India to inform and facilitate the design and pilot of behavioural science interventions to increase latrine use.

In the second phase, five research teams will be awarded grants of up to US\$300,000 each for implementing and evaluating interventions over an 18-month period. The scope and requirements of these grants are discussed in Section 4.

This call is for Phase 1 of the window.

2. Background

Open defecation (OD) is a widespread and persistent health challenge in India. Almost 60 per cent of the global population that practises OD is located in India (WHO and UNICEF 2015). In rural India, 90 per cent of households do not own a latrine, and 61 per cent of individuals defecate in the open (WHO and UNICEF 2015). The health consequences of OD are long lasting and life threatening, as it causes a variety of health-related problems, such as diarrhoeal diseases, trachoma, soil-transmitted helminthiasis and schistosomiasis, all of which are transmitted through the faecal-oral pathway created by OD (Mara *et al.* 2010). India accounts for the largest number of deaths of under-five-year-olds globally, primarily due to diarrhoea (UNICEF India 2016). OD also causes stunting in children, which, along with malnutrition arising from parasitic infection, diminishes cognitive abilities, lowers school productivity and diminishes human capital (Spears and Lamba 2015). OD's economic consequences are estimated to be around US\$53.8 billion or about 6.4 per cent of GDP (World Bank 2006).

While India made significant strides during the millennium development goals period (1990-2015) in reducing OD, nearly half (44%) of the more than one billion people in India defecate in the open (WHO and UNICEF 2015). In 2015, the Government of India initiated a national sanitation programme to eliminate OD by October 2019, with an investment of approximately US\$9.4 billion in SBM. This programme has guaranteed toilets to every household in India by 2019. A major aim is to increase latrine coverage in rural areas, where approximately 90 per cent of households do not have toilets.

However, latrine coverage alone does not lead to increased use of latrines, nor reduced faecal exposure. A multitude of supply- and demand-driven contextual factors influence latrine use. A variety of proximate causes of non-use have been detailed in the research literature: social and cultural forces and beliefs, especially related to ritual purity, caste and latrine pits (Coffey *et al.* 2014b; Human Rights Watch 2014); associations that encourage open defecation, such as with masculinity, strength, health and convenience (Coffey *et al.* 2014a; Coffey *et al.* 2014b); intra-

household power, sex, gender and age (Coffey *et al.* 2014b; Barnard *et al.* 2013; Routray *et al.* 2015); construction and design concerns (Routray *et al.* 2015; Shah *et al.* 2013); perceived cost and limited knowledge of options (Coffey *et al.* 2014a; Shah *et al.* 2013); bad smells associated with latrines (Rheinländer *et al.* 2013); and others not listed here. Additionally, demand for latrines among rural household decision-makers (working-age men) is lower than would be expected (Coffey *et al.* 2014a). Government-sponsored latrines are especially prone to disuse, repurposing for materials or used as a storage room.

Even though latrine use has widely been cited in popular media as a key factor for reducing OD (Junaid 2014; Soutik 2014), very few quantitative studies have focused on latrine use as a primary or secondary outcome.¹ Most interventions in this domain have focused on latrine construction, community-led total sanitation, subsidies, incentives, hygiene classes, information, education, and communication campaigns, or a combination of one or more of these elements. To address the knowledge gap in the literature, 3ie's Promoting Latrine Use in Rural India Thematic Window will investigate multidimensional supply and demand factors.

3. 3ie's expected pathway of change for the thematic window

Through the lifecycle of this thematic window, 3ie will be continuously engaging with grantees through regular meetings, field visits and reporting. Concurrently, 3ie, along with r.i.c.e., will be closely engaging with the national and local Rapid Action Learning Units (RALUs), as one of the main objectives of this thematic window is to inform the SBM. We will engage closely with RALUs to promote understanding of and commitment to evidence-informed decision-making and impact evaluations. Our engagement with RALUs will involve capacity-building workshops and continuous monitoring of evidence uptake from 3ie-supported rapid impact evaluations. 3ie will also facilitate grantee engagement with RALUs, if it is part of the grantee's stakeholder engagement and evidence uptake plan (SEEP)².

3ie has carried out preparatory work and consultation meetings and workshops with implementing agencies, non-governmental organisations and multilateral bodies to gain an understanding of latrine use in rural India. Appendix 1 illustrates the expected pathway of change for the thematic window.

3ie will provide oversight for the work carried out and reports produced by grantees under this thematic window. 3ie will produce a learning paper and a minimum of two impact evaluation briefs under this window, as well as publish the impact evaluation reports. 3ie's focus will be on documenting lessons learned and contributing to the body of evidence on the effectiveness of potential interventions to increase latrine use in rural India. We expect to organise dissemination events in June 2019 related to the results of the entire window, prior to the close of SBM in October 2019.

¹ 3ie has conducted a systematic review of quantitative literature on latrine use in rural India which will be published later. Studies were only included if they explicitly reported latrine use (either as a primary or secondary outcome). Only 15 studies were found after a systematic search of 5 peer-reviewed databases and 6 grey literature sources.

² 3ie will provide the SEEP template later.

4. Scope of the thematic window

This grant window focusses on the identification of low-cost effective interventions to promote latrine use in rural India. Interventions can target supply and/or demand factors that influence latrine use. 3ie encourages interventions that use behavioural science and other relevant social sciences, including psychology, sociology, anthropology and behavioural economics, to increase latrine use. The grants under this thematic window will be awarded in two phases.

4.1 Phase 1: Preparation grants

Selection of applicants

3ie will select eight teams for preparation grants in phase 1. For more information on the selection criteria, see section 8 below.

Inception workshop

At the beginning of phase 1, grantees will be invited to participate in an inception workshop. The purpose will be to familiarise grantees with 3ie processes, share ideas and discuss feedback on their submitted applications. Each organisation should be represented by up to three delegates: the lead PI, an Indian PI (if the lead PI is not Indian) and, if applicable, an implementing agency staff member. This two-day workshop will be held on 7-8 November 2016 in New Delhi, India. Costs associated with this workshop will be covered by 3ie. Covered costs include economy class return airfare or second class air-conditioned train fare, meals and hotel accommodation for three nights, according to the maximum allowance set by 3ie. Any additional expenses are the responsibility of the selected teams.

Engagement with implementing agency and capacity-building workshop

During the formative work carried out in phase 1, the selected research teams will engage closely with implementing agencies and other relevant stakeholders to identify high-potential interventions.

3ie expects each selected study team to hold at least one capacity-building workshop to facilitate the exchange of knowledge between implementing agency staff, other key actors (such as programme beneficiaries) and the research team.

Formative study report and impact evaluation proposal

3ie expects research teams to use their preparation grants for carrying out formative work and for developing their impact evaluation proposals. Depending on the nature of the planned intervention and impact evaluation design, proposal preparation activities would include a literature review, formative research and pilot testing of interventions³ at study sites, meetings with implementing partners, engagement workshops (capacity-building workshop as described above) and site visits.

The formative field research should identify a menu of interventions that draw on behavioural science to illustrate the feasibility, cost-effectiveness and community acceptability of the proposed interventions. To facilitate this process, 3ie requires grantees to conduct small pilots or tests of the proposed intervention to ensure that the ideas are, at a minimum, logistically

³ 3ie does not expect a rigorous pilot test at this stage, considering time and budget constraints. Rather, this pilot is intended to be a rapid proof of concept to assess financial and logistical feasibility prior to implementing the intervention in phase 2.

feasible. 3ie plans to have regular phone meetings with grantees during phase 1 for updates on the progress of the preparatory work.

At the end of phase 1, each team is expected to submit these documents:

- a formative study report that includes a report on the pilot test; and
- an impact evaluation proposal using the 3ie template⁴.

Phase 1 budget

A preparation grant of up to US\$30,000 will be awarded to each selected team. As indicated earlier, the grant may be used to cover costs associated with carrying out the formative study and developing an impact evaluation proposal. The budget would cover costs associated with site visits, field testing, engagement activities, including workshops, researcher time and travel.

Post-phase 1 learning workshop

Once all grantees have submitted their deliverables at the end of phase 1, 3ie will convene a learning workshop to facilitate the sharing of experiences among grantees. This workshop will be scheduled for March 2017. 3ie will cover the cost of economy-class air travel for one member from the research team (preferably the Indian PI) and one member of the implementing agency. An important objective of this workshop will be to discuss a learning report that 3ie will produce at the end of the study period.

4.2 Phase 2: Rapid impact evaluation of pilot intervention

Impact evaluation and deliverables

During phase 2, 3ie expects research teams and implementing agencies to implement and evaluate their proposed intervention to promote latrine use in rural India. 3ie will monitor implementation progress through regular phone calls, engagement activities, field visits and reporting.

At the beginning of phase 2, 3ie expects each team to submit a completed SEEP and then implement it. During the course of the grant cycle, teams will be expected to submit a financial progress report, SEEP progress reports and learning reports on the evaluation and other technical deliverables, as per the deliverables and disbursements schedule agreed with 3ie at the time of signing the grant agreement. To ensure the quality and integrity of impact evaluations, grantees will be required to pre-register their studies and submit anonymised data and code files that 3ie will make publically available.⁵

Phase 2 budget

An impact evaluation grant of up to US\$300,000 will be awarded to each selected team at the beginning of this phase. The grant will cover costs associated with the implementation of the intervention and its rapid impact evaluation. The budget would cover costs associated with personnel time, travel, data collection, product development (if applicable), and engagement workshops. See also relevant budget guidance in section 5 below.

⁴ The template for the formative study report and the impact evaluation proposal will be provided later.

⁵ Applicants may complete registration on the [3ie Registry for International Development Impact Evaluations \(RIDIE\)](#), or other registries of their choice. However, 3ie will require evidence of such registration, the details of which will be communicated at a later date.

Phase 2 mid-term learning workshop

3ie will organise another learning workshop in February 2018. The objective of this workshop will be to share experiences and take stock of the progress being made on the rapid impact evaluations. We expect one PI and one implementing agency representative to attend the workshop. 3ie will cover travel costs as described for the first workshop.

5. Guidance for prospective grantees

The intervention must be implemented in rural India. Interventions may target households, schools, childcare centres or work sites, as well as administrative offices at the district, municipal or village levels.

3ie encourages applicants to use behavioural science approaches to increase latrine use. Interventions costs should not exceed an average of US\$20 per household, excluding funding from other sources. Other sources include voluntary household contributions or NGO funding.

The following points of guidance are offered for preparing your application.

Innovative, behavioural science approaches to fill a critical evidence gap and support

SBM: The formative study plan and impact evaluation proposal should include a justification for why the intervention is innovative and how the impact evaluation would be filling a critical knowledge gap. The proposed interventions should be aimed at increasing toilet use. They could include a product (such as latrines or cleaning supplies), a process (such as a community approach to improving sanitation, facilitation of access to financial assistance), or a combination of both approaches. They need to be designed and customised for specific contexts. Grantees may situate interventions where SBM or similar programmes have been implemented. In the impact evaluation proposal, applicants will be required to discuss the feasibility of replicating the intervention in other districts or states in India, as well as explain its relevance to the context in which it will be implemented.

Rigorous formative studies: The formative study report should identify innovative interventions with a high potential for increasing latrine use. The report should also include the results of a small pilot or rapid field test of the intervention. The study report should (1) provide a strong rationale for the effectiveness and cost-effectiveness of the proposed intervention in the specified context, and (2) include a report of engagement activities with stakeholders.

Behavioural science approach: Applicants should provide an explicit behaviour change framework, along with necessary assumptions, which will inform the impact evaluation design. Examples of existing frameworks include the Capabilities Opportunities Motivations-Behavioural Model (Michie *et al.* 2011), MINDSPACE (Dolan *et al.* 2010), The World Bank's 8 principles for nudging and behaviour change to reduce OD (Neal and Vujcic 2016), and Integrated Behavioral Model for WASH (Dreibelbis *et al.* 2013). Subsequent revisions to the theory, if any, after completion of phase 1 should be specified in the proposal for impact evaluation prior to phase 2.

There are a number of behaviour change techniques that applicants may wish to employ within their chosen framework.⁶ Applicants may choose any existing behaviour change technique from the literature, or design a new one, provided that the feasibility and proposed causal effect pathway is specified prior to the impact evaluation proposal.

⁶ For instance, a taxonomy of 93 behaviour change techniques, consensually agreed-upon by 14 behavioural science experts could be consulted (Michie *et al.* 2013).

Strong programme theory of change: Proposals should include a description of the causal pathways between the intervention and main outcomes of interest. They should clearly lay out the theory underlying the assumptions and supporting evidence for each intervention node. The impact evaluation proposal and final report must include a suitable figure showing the theory of change graphically.

High-quality impact evaluations: The proposals for impact evaluation should include detailed descriptions of methods and timelines. Applicants also need to demonstrate the feasibility of using experimental design to measure attributable change in target outcomes and impact variables. Proposals must meet [3ie's definition of rigorous impact evaluation](#). They should have robust identification methods and should be adequately powered to measure outcomes. They should be able to account for common threats to causal validity, including programme placement bias, confounding, sample selection bias, biases arising from spillovers and contamination, and biases in outcomes data collection and reporting.

Mixed-method evaluation design: The programme theory of change requires a mix of factual and counterfactual analysis that draws on both quantitative and qualitative data. By incorporating mixed methods for data collection and analysis, we expect impact evaluations to answer for whom, why, at what cost (magnitude of impact and cost) the intervention will increase latrine use. Given the short timeframes, we do not expect long, multi-year impact evaluations. 3ie encourages subpopulation and equity-focused analyses on marginalised and vulnerable people, such as women, children, and elderly, individuals living with disabilities, scheduled castes or scheduled tribes. The impact evaluation should also include the cost-benefit or cost-effectiveness analysis of interventions.

Beneficiary and stakeholder-informed design, engagement, and dissemination: Applicants will be required to explain how they will ensure that the study is relevant to national and local policy governing SBM and related implementation. Research teams are expected to regularly engage with primary intervention beneficiaries, including preliminary findings, to elicit insights and feedback for incorporation into the intervention's implementation and evaluation. Additionally, grantees must plan to share final results and recommendations with primary beneficiaries, as well as the implementing agency in a final dissemination event(s). These activities should be noted in the SEEP and reported in progress reports.

6. Eligibility

- Interventions must target latrine use in rural Indian settings.
- Where applicable, proposed interventions must cost an average of US\$20 per household, excluding funding from other sources.
- Only legally registered organisations and consortia of registered organisations, not individuals, may apply.
- The grant-holding organisation and the lead PI may be located anywhere in the world.
- The research team must include at least one PI who is an Indian national and resident in India. S/he should be working for an organisation registered in India or could be an independent consultant resident in India. The Indian researcher must be engaged in substantive tasks, including formative study plan and impact evaluation proposal preparation, data analysis, report writing and stakeholder engagement for understanding findings and for uptake of evidence into policy and programming.

- At least one team member should have experience in designing and/or implementing behavioural science interventions.
- At least one team member should have experience in designing and/or implementing sanitation interventions.
- At least one team member should have experience in designing and implementing randomised evaluations.
- Each proposal must be submitted by a single organisation that may include others as sub-grantees or sub-contractors (subject to 3ie's [direct](#) and [indirect](#) cost policies).
- For-profit organisations are eligible to apply, but are restricted to the same indirect cost limits as non-profit organisations and may not charge a fee.
- The applicant organisation must be able to sign the [3ie preparation grant agreement](#), a sample of which is available on the 3ie website.
- Organisations may submit more than one proposal and may be included on more than one proposal. They should, however, have the capacity to implement any and all grants awarded to them under the programme.
- All proposals must have sufficient resources for undertaking high-quality impact evaluations. If the proposal is dependent on other resources, this should be clearly indicated in the narrative and in the budget. If selected for this window, the applicant will need to ensure that these additional resources are available at the time of signing the agreement with 3ie. In the absence of this documentation, the offer of 3ie grant support will be withdrawn.

7. Timeline

The current call is for submission of qualifications and formative study applications for phase 1. All submissions must be made using [3ie's online grant management system](#), which will be activated for applications under this thematic window on 31 August 2016. A sample [qualification application form](#) for phase 1 is available on the 3ie website.

The deadline for submitting qualifications and formative study applications (phase 1) is 18:00 IST, 27 September 2016. Table 1 lists the key dates for both phases.

Table 1: Key dates for activities or deliverables

Activity or Deliverable	Key dates (all deadlines 18:00 IST)
Phase 1: preparation grant	
RFQ posted	16 August 2016
Deadline for questions	30 August 2016
3ie online grant management system activated for application submission	31 August 2016
Q&A document posted	6 September 2016
Deadline for submission of qualifications	27 September 2016
Announcement of awards and signing of grant agreements	31 October 2016
Inception workshop	7-8 November 2016
Deadline for submission of phase 1 reports (including pilot results) and impact evaluation proposals	28 February 2017
Post-phase 1 learning workshop	14 March 2017

Phase 2: impact evaluation grant	
Comments on submitted proposals sent to teams	17 April 2017
Deadline for submission of revised proposals	24 April 2017
Announcement of awards and signing of grant agreements	28 April 2017
Selected teams begin implementation	1 May 2017
Mid-term learning workshop	February 2018
Final study report submitted to 3ie	31 December 2018
3ie organised dissemination events held	June 2019

8. Selection criteria

Qualification applications and impact evaluation proposals will be reviewed and scored by two internal reviewers and at least one external reviewer. 3ie may provide comments and request applicants to make changes to their impact evaluation proposal. 3ie reserves the right not to award any grant in case no applicant meets the requirements. Qualification applications and impact evaluation proposals will be scored between 1 and 5 based on the criteria listed in Table 2. The scoring weights are also presented in Table 2.

Table 2: Preparation grant and impact evaluation proposal criteria

Phase 1: Preparation Grant	
Criteria	Weight (%)
Technical quality of formative study plan <i>Assessed from the qualification application form</i>	30
Behavioural science experience of the team <i>Assessed from the qualification application form, the cover letter, CVs and sample publications</i>	15
Sanitation experience of the team <i>Assessed from the qualification application form, the cover letter, CVs and sample publications</i>	15
Impact evaluation experience of the team <i>Assessed from the qualification application form, the cover letter, CVs and sample publications</i>	15
Organisational capabilities to manage the grant <i>Assessed from the qualification application form</i>	10
Cost-effectiveness <i>Assessed from the budget form</i>	10
3ie membership of research and/or implementing agency <i>Assessed from the qualification application form</i>	5

Phase 2: Impact evaluation grant	
Criteria	Weight (%)
Internal validity of proposed method <i>Assessed from the impact evaluation proposal form</i>	30
Theory of change of the intervention <i>Assessed from the impact evaluation proposal form</i>	15
Intervention potential to promote latrine use demonstrated from phase 1 <i>Assessed from the impact evaluation proposal form</i>	10
Experience of research team in using experimental and quasi-experimental methods for impact evaluation <i>Assessed from the impact evaluation proposal form</i>	10

External validity and scalability of results <i>Assessed from the impact evaluation proposal form</i>	10
Potential for policy, programming and beneficiary uptake <i>Assessed from the impact evaluation proposal form</i>	10
Cost-effectiveness <i>Assessed from the budget form</i>	10
3ie membership of research and/or implementing agency <i>Assessed from the impact evaluation proposal form</i>	5

9. Instructions for applicants

Qualification applications must be submitted through 3ie's [online grant management system](#) and include the following components:

- Cover letter: A brief description of the proposed team members, their experience and qualifications, and a table showing the division of tasks and time allocation of team members.
- Completed formative study plan: The form will be live from 31 August 2016 on the online grant management system. The formative study plan will include the following sections:
 - Understanding of the scope of the grant and work required;
 - Background on sanitation in rural India, with a focus on barriers and determinants of latrine use;
 - A proposed process for identifying potentially high-impact behavioural science-informed interventions to increase latrine use (specific interventions are less important at this stage than the process for identifying them, although previous formative work, if any, should be presented); and
 - Proposed timeline of activities.
- Budget following 3ie budget template form. The proposed budget must follow [3ie's direct cost](#) and [indirect cost policies](#) and include the cost of evaluation, costs of engagement with key stakeholders and dissemination, and costs of report production. Budget notes may be submitted as a separate document in Microsoft Word or .rtf file in font size equal to 11.
- Curriculum vitae (CV, not to exceed three pages each) of all research team members who will be involved in the project. Applicants are required to provide only information relevant to the grant in their CV.
- Copies of up to two reports or publications relevant for this call which has proposed PIs as named authors.

10. Submission guidelines

Qualification applications must be submitted through [3ie's online grant management system](#) **no later than 18:00 IST, 27 September 2016**. Please note that study plans and other application files will only be accepted through 3ie's online grant management and not by any other means.

If you have queries related to this RFQ, please read the [Frequently Asked Questions \(FAQs\)](#) document. Any other questions related to this RFQ can be sent to tw14@3ieimpact.org with 'TW14 RFQ query' in the subject line by **18:00 IST, 30 August 2016**. A single document with all questions and answers will be made publicly available on the [3ie website](#) by 6 September 2016.

3ie has published a list of interested implementing agencies and research organisations that are looking for suitable partners for submitting an application to this grant window. Once the names are published, organisations are expected to initiate contact directly with potential partners. 3ie will not be involved in matching teams. For more information, please visit the [matchmaking page](#) on the 3ie website.

This RFQ does not constitute a guarantee of an award.

11. References

Barnard, S, Routray, P, Majorin, F, Peletz, R, Boisson, S, Sinha, A and Clasen, T, 2013. Impact Of Indian Total Sanitation Campaign On Latrine Coverage And Use: A Cross Sectional Study In Orissa Three Years Following Programme Implementation. *Plos One*, 8 (8).

Coffey, D, Gupta, A, Hathi, P, Khurana, N, Spears, D, Srivastav, N and Vyas, S, 2014a. Revealed Preference For Open Defecation. *Economic And Political Weekly*, 49, 43.

Coffey, D, Gupta, A, Hathi, P, Spears, D, Srivastav, N and Vyas, S, 2014b. *Culture And The Health Transition: Understanding Sanitation Behavior In Rural North India*. IGC-ISI Development Conference (Delhi) Working Paper.

Dolan, P, Hallsworth, M, Halpern, D, King, D and Vlaev, I, 2010. MINDSPACE. *In: Institute For Government, U. G. (Ed.)*. London: Cabinet Office, Government Of The United Kingdom.

Dreibelbis, R, Winch, PJ, Leontsini, E, Hulland, KR, Ram, PK, Unicomb, L, and Luby, SP, 2013. The Integrated Behavioural Model For Water, Sanitation, And Hygiene: A Systematic Review Of Behavioural Models And A Framework For Designing And Evaluating Behaviour Change Interventions In Infrastructure-Restricted Settings. *BMC Public Health*, 13, 1-13.

Human Rights Watch, 2014. Cleaning Human Waste: "Manual Scavenging", Caste And Discrimination In India.

Junaid, A, 2014. How To Eliminate Open Defecation By 2030. *In: Devex (Ed.) Development Buzz*. Devex.

Mara, D, Lane, J, Scott, B and Trouba, D, 2010. Sanitation And Health. *Plos Med*, 7, E1000363.

Michie, S, Richardson, M, Johnston, M, Abraham, C, Francis, J, Hardeman, W, Eccles, MP, Cane, J and Wood, CE, 2013. The Behavior Change Technique Taxonomy (V1) Of 93 Hierarchically Clustered Techniques: Building An International Consensus For The Reporting Of Behavior Change Interventions. *Ann Behav Med*, 46, 81-95.

Michie, S, Van Stralen, MM and West, R, 2011. The Behaviour Change Wheel: A New Method For Characterising And Designing Behaviour Change Interventions. *Implement Sci*, 6, 42.

Neal, D and Vujcic, J, 2016. Nudging And Habit Change For Open Defecation: New Tactics From Behavioral Science.

Rheinländer, T, Keraita, B, Konradsen, F, Samuelsen, H and Dalsgaard, A, 2013. Smell: An Overlooked Factor In Sanitation Promotion. *Waterlines*, 32, 106-112.

Routray, P, Schmidt, W-P, Boisson, S, Clasen, T and Jenkins, MW, 2015. Socio-Cultural And Behavioural Factors Constraining Latrine Adoption In Rural Coastal Odisha: An Exploratory Qualitative Study. *Bmc Public Health*, 15, 1-19.

Shah, A, Thathachari, J, Agarwai, R and Karamchandani, A, 2013. White Paper: A Market Led, Evidence Based Approach To Rural Sanitation.

Soutik, B, 2014. Why India's Sanitation Crisis Needs More Than Toilets. *BBC News*. BBC.

Spears, D and Lamba, S, 2015. Effects Of Early-Life Exposure To Sanitation On Childhood Cognitive Skills: Evidence From India's Total Sanitation Campaign. *Journal Of Human Resources*.

UNICEF India, 2016. *Eliminate Open Defecation* [Online]. UNICEF. Available: <http://unicef.in/whatwedo/11/eliminate-open-defecation> 2016].

WHO and UNICEF, 2015. Joint Monitoring Programme For Water Supply And Sanitation. In: Wh (Ed.) *Progress On Sanitation And Drinking Water: 2015 Update*. Geneva.

World Bank, 2006. Inadequate Sanitation Costs India Rs. 2.4 Trillion (Us \$53.8 Billion). In: (WSP), W. A. S. P. (Ed.) *The Economic Impacts Of Inadequate Sanitation In India*. New Delhi: World Bank.

Appendix 1: 3ie’s expected pathway of change for the thematic window

