

## Open stakeholder consultation process: response to feedback

The review team would like to thank everyone who provided feedback on the methodological plan for systematic review on gender and social equality outcomes of WASH interventions. The comments very extremely valuable and have greatly strengthened our work.

Below you will find detailed responses to comments pertaining to 1) search string suggestions, 2) grey literature search suggestions, and 3) general feedback received.

### 1. Feedback on search string

We received a number of suggestions for search terms which have all been tested (see **Table 1**). Some suggestions are not included in the final search string for the following reasons: 1) Some proposed terms are usually used across different contexts or research fields which resulted in low level of precision of the search string, and yielded unmanageable number of search results; 2) Some proposed terms related to concepts that were already included as some other search terms (and adding these additional terms did not yield any new search results during testing). The final search string was tested against a list of benchmark studies (pre-identified relevant studies eligible for the review) and the new search string picked up all the studies from the list indicating high comprehensiveness of the search string.

Table 1: Response on search terms suggestions

<b>Suggested construct from stakeholder consultations</b>	<b>Potential keywords</b> Note: *Terms in blue suggested during open consultation (July-August 2020)	<b>Final search terms or strings (after scoping)</b>
Change in intra-household dynamics, Reduction of unpaid labour and increase in available time	Work, labor/labour, unpaid, time, time-savings, leisure, Gendered division of labour, Intra-household WASH access Intra-household power dynamics	"unpaid labour", "time saving*", time\$aving*, fetch*
Increased school participation and attendance	School, drop-out, school attendance and participation, education, schooling	school*, educat*
Safety and reduced gender-based violence, intimate-partner violence related to water and sanitation	Violence, Gender based violence (GBV), Do No Harm, IPV, fear, safety	violen*, dignity, fear,
Reduced discrimination	Discrimination, fear, stigma, taboo	discrimina*, fear, stigma, taboo
Participation of underrepresented groups in WASH governance	Participation, inclusive WASH	voice, inclusive
Decision-making in WASH and control over assets	Agency, decision-making, say, voice, appropriation	leadership, voice, prestig*

Sexual and reproductive health and rights (e.g. reduced child marriage, transactional sex and unwanted pregnancy)	Marriage, pregnancy, child, transactional sex	child*, daughter*, girl*
Self-confidence and self-esteem increased through participation in WASH interventions	Self-esteem, self-confidence, self-efficacy, self-consciousness, leadership, voice	esteem, confiden*, conscious*, voice, inclusive, leadership, prestig*
Social capital through WASH interventions	Social capital, participation, community	"social capital", inclusive
Sanitation meeting needs of people with disabilities and older adults	Disability, dignity, privacy, older, intersectionality	elder*, disability, intersect*, privacy
Empowerment through WASH	Empowerment, power, transformative WASH, inclusive WASH, unintended consequences, gender and social norms change	empower*
Sanitation & hygiene meeting needs of women and girls	Menstrual hygiene, privacy, incontinence, menopause, dignity, shame, MHM, intra-household, periods, hygiene and care roles, menopause	privacy, dignity, sham*, taboo, stigma; menstr* OR menarche* OR menses OR catamenia*; "menstrual poverty" OR "period poverty"
Psychosocial stress, mental health and wellbeing	Psychosocial, wellbeing, well-being, happiness, life satisfaction, quality of life, mental health, stress, hiv/aids, tuberculosis, DDD, Defined Daily Dose	"psychosocial stress" OR "psycho-social stress, wellbeing OR well-being, "mental health"
General equality or equity	Equality, equity, inclusive, #GESI, Gender Equity and Social Inclusion	equal*, equity, unequal*, boy*, girl*
Increased income-generation and livelihood opportunities	Poverty, income, livelihood, afford*	income, povert*
WASH inclusive of gender and marginalized groups	Indigenous, cast, gender, "social class", intersectionality, Sexual and Gender minorities, Inclusive WASH	caste, gender, OR transgender OR femin* OR masculin* OR "social class" OR "sexual minorit*" OR "gender minorit*"
Lack of or Informal sanitation arrangements due to lack of land tenure.	"land tenure"	"land tenure"

WASH components, technologies, actors	Fecal sludge, tippy taps, soak pit, "water treatment", "water point", "water entrepreneur", "sanitation entrepreneur", "hygiene entrepreneur", "water committee", "toilet entrepreneur", "latrine entrepreneur", fecal, waterborne disease, "water system" "water service" "water insecurity" "improved water", Urine-Diverting Dry Toilet, Composting toilet, Double- Pit Flush Latrine, Pour-flush latrine, Urine Diverting Compost Toilet, open defecation, #hygienepromo or #hygienepromotion, WASH	(toilet* OR latrine* OR "septic tank*" OR watsan OR sewerage* OR sanitat* OR sewage OR wastewater* OR "water suppl*" OR "water access" OR "water management" OR (water NEAR drinking) OR "water scarcity" OR handwash* OR soap\$ OR "WASH intervention*" OR "piped water" OR "tippy tap*" OR "soak pit" OR "water treatment" OR "water point" OR "water service" OR "water insecurity" OR "open defecat*" OR "hygiene promo*" OR "water pump" OR "menstrual poverty" OR "period poverty")
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## 2. Suggestions for grey literature

We received 33 additional suggestions for grey literature sites to search. From these additions, 7 were not included as they were repetitions, did not include any material on WASH, or focused on sharing academic publications. The latter are excluded because academic publications are picked up in our main search strategy. The remaining suggestions are being searched to obtain materials for later screening.

## 3. Other feedback

How do we include the boy child and men in this fight of gender equality for it not to be termed as a women's issue and to gain their support and champions who will sell the same message?	Gender, boys and masculin* are included in the search string, and any studies examining outcomes related to boys will be included. In our analysis of results we will indicate gaps in how outcomes related to social groups.
This should not become another scientific peer reviewed journal alone. It must include voices from the field by those who are directly impacted by all interventions in WASH and gender related initiatives.	The review findings will be communicated with diverse stakeholders through a number of non-academic channels to ensure the findings can be taken up by actors working in the field.
Economic empowerment is considered as one of the effective means to make active participation from the women, poor and vulnerable as front-line performers in entire cycle of the project implementation.	Economic empowerment related to WASH will be included as an outcome in the review.
The sentence regarding comparators for quantitative research is unclear: what does "alternative intervention" refer to? Another intervention in a different context?	These suggestions have been taken up in the protocol, e.g. clarification of comparators, and describing empowerment of women and socially

<p>Also, it is not clear what type of participants means. There is need for a definition of what "type" refers to. It would also help to rephrase the first sentence of that paragraph to "Participants are restricted to those in low- and middle-income countries. Participants of all types, where type refers to XXX, will be included."</p> <p>Under type of interventions, there is some confusion over how "hardware" and "software" interventions are categorized. Behaviour change is a specific model that is completely counter to health messaging so it does not make sense to categorize health messaging under behaviour change. I suggest using "software" interventions as a general category and including behavioural change design, health messaging, and public health/WASH education under it.</p> <p>Also, strongly suggest replacing psychosocial triggering with behavioural triggering.</p> <p>Under types of outcome measures, consider broadening empowerment to marginalized groups and replacing "work burden" with "gendered responsibilities" as work generally implies paid labour. I suggest removing mention of participation in social, economic and political spheres because it would water down the outcomes being measured. Everyone participates in some way within social, economic and political spheres. The question is whether that participation is meaningful and empowering, so decision-making should be the best means for evaluating GSE outcomes.</p>	<p>marginalized groups. With respect to participation in different spheres, this has been modified to 'meaningful participation', however these are long-term outcomes are part of the Theory of Change but are not expected to be directly measured in interventions.</p> <p>Regarding behaviour change, this is used as a broad term rather than referring to a specific model. It may encompass strategies that are linked to health such as RANAS, or others. We have changed the heading to 'WASH promotion' to capture a range of different 'soft' approaches.</p>
<p>Under Assumptions and Risks, suggest changing "weakening of gender mainstreaming" to "unintended harmful effects" to encompass harm that does not strictly fall under gender mainstreaming (for example, unpaid domestic labour shifted to the elderly or to a lower caste).</p> <p>Under Intervention Components, suggest changing "safely managed water/sanitation" to "access to safe water/sanitation". Also, menstrual hygiene management is not really hardware provision. Perhaps a separate category of Non-Food Items is helpful to encompass access to WASH hygiene materials and MHM (these are usually distributed consummable goods rather than constructed facilities). Again, suggest changing behaviour change as a category to "software interventions". Social marketing is usually understood to be separate from behavioural triggers, although they are both part of behaviour change interventions. Behaviour change is a model of subconscious behavioural influences. It is</p>	<p>These suggestions have been taken up in the protocol, including other examples of unintended harmful effects that related to other social identities.</p> <p>Safely managed refers to the JMP targets while hardware provision related to MHM refers to a safe disposal facilities and waste management chain.</p> <p>Behaviour change has now been listed under 'WASH promotion' which is a more general category</p>

<p>counter to the kind of social and emotional leverages that social marketing and CLTS use.</p> <p>"Work-burden" is a bit confusing. Perhaps unpaid labour or responsibilities are better?</p> <p>MHM should also be included at the individual/household level (under "Inclusive outcomes").</p>	
<p>I suggest discussing intersectionality as a framework for understanding gender and social equality as part of the Background section. Under section 1.2, consider including factors of economic class, citizenship status, and displacement/relocation history of groups that affect access to WASH services.</p> <p>Under section 1.3, consider rephrasing "WASH-related inequalities" because it implies inequalities that arise from WASH interventions, whereas GSE looks at larger inequalities that WASH interventions may replicate or exacerbate. Suggest replacing with "gender and social inequalities that manifest in WASH interventions".</p> <p>Also under section 1.3, consider defining what "complex WASH interventions" means. The term is in the title and in later parts of the protocol, but is not used in the subparagraph heading. The second sentence is rather vague. How many components does it take to qualify an intervention as "complex"? I would argue that all WASH interventions are complex because there are so many socioeconomic and psychological aspects that are tied to WASH.</p> <p>Under GSE outcomes, in the second sentence - consider adding WASH barriers so that it's not just WASH needs of different social groups. This paragraph describes a lot of outputs rather than outcomes. For example, provision of water at more convenient locations is an output. The outcome would be women spending less time fetching water. Provision of sanitation in public spaces is an output. The outcome would be women spending more time in public spaces or a lower school drop-out rate for girls.</p> <p>The following paragraph refers to unpaid care work, which is then conflated with domestic work (fetching water). Suggest revising wording to ensure consistency. Furthermore, consider using an example of women gaining control and expertise in managing a water source, perhaps acquiring land tenure documentation for the water source, and gaining financial autonomy through WASH entrepreneurship. The example of men fetching</p>	<p>These suggestions have been taken up in the protocol, e.g. we added a reference to intersectionality, and this is also included in the methods as much as possible within the review methodology (we will record where the study examines multiple social identities). We have added the social identities suggested, and have modified the text to "inequalities related to WASH and broader society" as inequalities might be related to a lack of infrastructure as well as more cross-cutting structural issues.</p> <p>With respect to outputs and outcomes, given that we are trying to be as comprehensive as possible, we will be including and describing outcomes across a spectrum, moving from inclusive to transformative for gender and social equality. An outcome targeted for one intervention, can be considered an output for other interventions. Although one outcome of an improved sanitation block may be better participation in educational opportunities, for many other WASH interventions provision of infrastructure will be reported as an outcome. We have elaborated on this in the protocol.</p>

<p>water does not lead to women's empowerment. It's a very weak link between women having more time and becoming empowered. There's a lot more to empowerment than simply women having more time on their hands. I also suggest avoiding referring to "roles" in the household because it's a fairly broad term that can refer to identities and religious beliefs that stray from GSE.</p> <p>Suggest replacing the term "role" to "asymmetric power dynamics" so that it's clear the criticism is aimed towards a discussion of social equality.</p>	
<p>Within Table 1: The description of "Power within" may benefit from a reference to the term self-efficacy. Transformative GSE outcomes under "Power to" could benefit from expanding gender-based participation beyond the household level (most facilities are community level). Unpaid work should also be expanded to community level because a lot of cultures share childcare and domestic work responsibilities with extended family/neighbours. The third point (under-represented groups obtain leadership positions in the WASH sector), should really be under "Power over". Suggest emphasizing engagement of under-represented groups in design processes and WASH trainings instead. Under "Power over", the point about acquiring technical and managerial skills should be under "Power to". Under "Power with", suggest strengthening the GSE outcome to development of cross-sectoral (beyond WASH) initiatives and structures that focus on transformative GSE outcomes.</p>	<p>Changes to Table 1 have been made.</p>
<p>Under Objectives (line 254), suggest that findings also be provided to donors and coordinators responsible for drafting WASH strategies.</p>	<p>WASH strategies has been added as well as interventions. The findings from the review will be widely shared with stakeholders.</p>
<p>In section 1.2 you refer to gender and explain the difference between gender and sex but do not mention anything about gender minorities, but you refer to it further in the document. Would it be worth clarifying to the audience what gender minorities are and how they will be addressed in this section?</p>	<p>We have clarified this further.</p>
<p>Suggestion to change safe to 'safely managed'</p>	<p>This change has been made</p>
<p>Is location a social identity? since we discuss rural vs urban later in the paper</p>	<p>We clarified that we focus on both rural and urban settings (see under Types of participants in Criteria for inclusion...)</p>
<p>62 if this section is to list the woes of women in water I would also add: sanitation-related psychosocial stress, physical impact of load carrying, and lack of access to high-paid/prestigious employment in the water sector</p>	<p>We have added health outcomes related to gender roles such as water fetching, and psychosocial stress related to sanitation. Employment outcomes are included but were not clear in the ToC, so this has been clarified.</p>

<p>114 section 1.2 I would also encourage inclusion of aspects related to age (i.e. the burden on young girls/adolescents) as well as the multi-purpose use of water points (for ag/livestock production for example, which is also very gendered - boys are often responsible for water for livestock)</p>	<p>Description of aspects related to age have been expanded on in the protocol.</p>
<p>It would be good to have a bit more clarity around what is meant by negative, inclusive and transformative and a citation on where this framing is coming from. I understand that this is from WaterAid, but there is a lot of good stuff out there from the public health sector on these categories, or for example Kabeer 1994. I also highly recommend including an instrumental category to this spectrum</p>	<p>Definitions of "negative, inclusive and transformative" outcomes are provided in the section GE outcomes including citations. We have also added a reference to instrumental approach in WASH design and implementation ("This frequently involves instrumental approaches, whereby the focus is on 'engaging women' to achieve certain technical or health WASH outcomes (e.g. engaging women to promote child health) (MacArthur et al. 2020)"), however, we have not included 'instrumental approach' in the theory of change as this is already covered implicitly.</p>
<p>Do you have a strategy for the databases on whether you will use title or topic searches? I do recommend topic searches if you are going to do such a big search.</p>	<p>We are planning to conduct searches on title, abstract and keywords (i.e. Topic searches) in databases/search sources where that is meaningful/feasible (e.g. Web of Science).</p>
<p>I would recommend including a clear limitations section.</p>	<p>This is a systematic review protocol, there is no results or the review. We will include Limitations section in the final review report.</p>