

# STRENGTHENING SANITATION AND HYGIENE IN THE WASH SYSTEMS CONCEPTUAL FRAMEWORK

## EXECUTIVE SUMMARY

### CONSIDERATIONS FOR EVOLUTION OF WASH SYSTEMS CONCEPTS AND FRAMEWORKS, AND EXAMPLES OF SYSTEMS STRENGTHENING

DISCUSSION PAPER  
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## WHAT IS THE PURPOSE OF THIS DISCUSSION PAPER?

The Sustainable Services Initiative (SSI) of Welthungerhilfe (WHH) seeks to strengthen the sustainability of its WASH programming through adopting systems strengthening approaches and seeks to add value to wider sector efforts in systems strengthening, through participation in movements such as Agenda for Change (A4C). The SSI is primarily financed by Viva con Agua and WHH with technical support from Aguaconsult and German Toilet Organisation.

The genesis of this paper was during the kick-off workshop of the SSI, when WHH country teams received orientation to concepts of WASH systems and systems strengthening. Participants remarked on the apparent ‘water bias’ of what was being presented, and the SSI technical team was subsequently tasked to revise the tools and conceptual framework used in the SSI to better address sanitation and hygiene. Indeed, the sentiments from the workshop participants reflect the wider position of those working at WASH systems globally at the time<sup>1</sup>. It was agreed that a discussion paper be developed, not only for the SSI’s internal purposes, but also to contribute to the wider sector debate around how to better capture sanitation and hygiene in WASH systems thinking and approaches.

This discussion paper reflects the SSI’s evolving thinking on this topic, particularly on questions such as: what are key differences between water supply, sanitation and hygiene that may affect approaches to systems strengthening?; are conceptual frameworks and concepts for ‘WASH’ systems fully applicable to all three WASH sub-sectors?; if not, what adaptations are needed?, and; what examples are there of systems strengthening that are specific to sanitation and hygiene? The paper seeks to prompt and contribute to sector discussions and add to the available documentation on this somewhat neglected topic. It does not aim to be the definitive word on sanitation and hygiene systems strengthening, nor does it seek to prescribe specific concepts and frameworks to the wider sector.

## WHAT SYSTEMS CONCEPTS AND FRAMEWORKS IS THE PAPER REFERRING TO?

The concept of a WASH ‘system’, and the recognition of the need to strengthen it to ensure sustainable services at scale, has gathered momentum in the sector in recent years (WaterAid 2019). Huston & Moriarty (2018) define a WASH system as ‘all the social, technical, institutional, environmental and financial factors, actors, motivations and interactions that influence WASH service delivery in a given context’. Systems thinkers often refer to institutional ‘levels’ and categories of ‘actors’ within a system, including: national (sector) level authorities - responsible for aspects such as legislation, policy and regulation; ‘Service Authority’ those legally responsible for WASH services in a defined area (which is often, but not always, local government); and ‘Service Providers’ - those responsible for the day-to-day operation and management of WASH services (Lockwood & Smits, 2011; IRC 2018; Lockwood et al. 2017).



Figure 1: WASH System Conceptual Framework referred to in Agenda for Change publications. Source: A4C website<sup>2</sup>

To reduce complexity, various organisations have developed conceptual frameworks to represent the WASH system<sup>3</sup>, categorising ‘factors’ into what are often termed ‘building blocks’, which need to be in place, and sufficiently developed, to support sustainable service delivery<sup>4</sup>. The number of building blocks and categorisation varies between frameworks, depending on the ‘boundary’ of the system for analysis (e.g. within a city or district, or analysis at sector level), and the specific focus of such a framework. However, despite differing numbers of building blocks, there is much commonality between frameworks and in terms of factors. The framework presented in **Figure 1** is cited in numerous A4C-related publications<sup>5</sup>, and is based on the work of Aguaconsult, IRC and the World Bank, amongst others. The framework presents eight building blocks and political economy and governance as wider factors (beyond

<sup>1</sup> The difference in service delivery models between water and sanitation, and the need for further work on integrating S&H into systems conceptual frameworks and processes is reflected in Huston & Moriarty (2018), and Tillett & Smits (2017)

<sup>2</sup> [https://www.washagendaforchange.net/sites/default/files/uploads/20180827\\_agenda\\_for\\_change\\_building\\_blocks\\_presentation.pdf](https://www.washagendaforchange.net/sites/default/files/uploads/20180827_agenda_for_change_building_blocks_presentation.pdf)

<sup>3</sup> For example, the SWA’s five sector BB, WSUP’s Sector Functionality Framework, IRC’s 9 BB of the WASH System, and the seven BB used in the WASH Bat sector analysis tool, CWIS’s seven principles, and Triple-S’s 10 BB on rural water.

<sup>4</sup> Whilst WaterAid (2019) points to the risks of oversimplifying the complex, dynamic and adaptive WASH system into such BB frameworks, it also acknowledges the utility of such frameworks to help to simplify, categorise and analyse the more ‘static’ factors in the system.

<sup>5</sup> [https://www.washagendaforchange.net/sites/default/files/uploads/20180827\\_agenda\\_for\\_change\\_building\\_blocks\\_presentation.pdf](https://www.washagendaforchange.net/sites/default/files/uploads/20180827_agenda_for_change_building_blocks_presentation.pdf)

just the WASH system boundary) influencing the system and shows the interface with other sectors, such as health and education. As a member of A4C, WHH adopted this framework with eight building blocks for use in the SSI, and it is this framework which is the subject of the analysis in this discussion paper.

Various organisations which use such building block frameworks have developed a series of indicators (or 'sub-factors') defining (generally) what needs to be in place within each area to increase the likely sustainability of services. Such checklists are used for systems analysis, and to an extent for also monitoring systems change<sup>6</sup>. Again, there is no sector-wide consensus on these sub-factors. An initial building block checklist was developed by the SSI, and was intended to represent all three sub-sectors of WASH. It is this SSI checklist, together with the list of factors suggested in a recent building block paper by IRC (Huston & Moriarty 2018), which are used in this paper.

## HOW IS SANITATION AND HYGIENE DISTINCT FROM WATER SUPPLY, AND WHY DOES THIS MATTER?

WASH is a combination of three distinct sub-sectors (water, sanitation and hygiene). Whilst there is much similarity between them, there are also important differences, meaning that concepts or approaches for water supply may, or may not, be applicable for sanitation and hygiene, and vice versa. Below some of these key differences are identified and expanded upon as having an influence on how to conceptualise a WASH 'system' and the design of approaches to strengthen it.

- **Water supply is a public good, sanitation is often seen as a private good.** Whilst water supply is widely regarded a public service and generally delivered through infrastructure serving multiple households and in cases across several communities or small towns, outside of contexts where sewerage networks prevail, sanitation is often perceived a private good, particularly where the government or sector focus is on household toilets rather than the wider sanitation service chain. This means that service delivery models (particularly in rural areas) often take a communal approach for water but a household approach for sanitation (Huston & Moriarty, 2018). Hygiene products and services are generally considered private goods.
- **This distinction has implications for the roles and responsibilities of service authorities.** In public water supply, the responsibility to ensure the service rests with the service authority. The service authority often has roles including capital investment and ongoing support and monitoring, with daily operation & maintenance (O&M) done by a mandated service provider. For domestic toilets and hygiene, the responsibility for construction and financing sits with the household (or landlord), who is also generally responsible for the daily 'O&M' of the toilet 'service'. In this, the role of the service authority in sanitation and hygiene is more around ensuring an enabling environment for households and market-based service providers (e.g. masons, toilet emptiers); this contrasts with the more direct role of a service authority in ensuring provision of water supply services<sup>7</sup>.
- **The distinction makes the definition of a 'service provider' less clear.** A service provider is responsible for daily O&M and management of a WASH service. Whilst the term service provider is applicable for management of sludge treatment plants, construction and emptying of toilets, it is less applicable for daily 'O&M' of toilets, which is essentially done by households<sup>8</sup>. Households are generally defined as 'users' rather than 'service providers' in WASH systems concepts, meaning such definitions of the term "service provider" require further consideration<sup>9</sup>.
- **It also influences which aspect of the system, or actors need to be strengthened.** For water supply, a common focus of systems strengthening is on government processes and on strengthening capacities of the public water supply service providers. For sanitation and hygiene, whilst government systems and capacity are still critically important, for example, in creating an enabling service environment, there is also a need to focus on strengthening market systems and the capacities of market-based service providers, such as masons, FSM actors, etc.
- **Water is life, while sanitation and hygiene have greater links with culture and individual behaviours where people always have a choice.** Drinking water is a basic requirement for life and broadly speaking there is demand from users for water supply services. By contrast, the benefits of sanitation and hygiene are not always directly apparent to users and may be viewed as more 'optional' and hinged on user behaviours<sup>10</sup>. Whilst issues of demand creation, social norms and enforcement are important for water supply, they are critical for sanitation and hygiene, and need ongoing reinforcement<sup>11</sup>.
- **Sanitation often lacks political capital compared to water supply.** sanitation and hygiene often fail to receive adequate political interest and commitment, in comparison to water supply. This is in part reflective of demand and priorities of would-be voters, of cultural factors making discussion of sanitation undesirable, and of the less

<sup>6</sup> WaterAid (2019) highlights risks and recommendations on checklists, and on using such checklists for ongoing monitoring processes.

<sup>7</sup> However, moving beyond toilets to the wider sanitation service chain, services such as toilet emptying, and particularly sludge treatment, can bring sanitation closer to a 'public good', with greater responsibilities of the SA to ensure service provision.

<sup>8</sup> IRC (2011) states that the concept of a sanitation service does not necessarily imply an external service provider, but rather households take much of the role to ensure the service.

<sup>9</sup> The term 'service' is arguably less applicable for hygiene than it is to publicly-provided water supply, or sanitation services across the value chain. The WASH Cost programme defined the hygiene 'service' as the 'service' of households receiving ongoing hygiene promotion messaging (IRC 2011), which is quite different to a water supply or sanitation service, with their more easily definable 'levels of service'.

<sup>10</sup> For example, a user can choose to use a toilet or not or choose to opt for a 'safe' or 'unsafe' mode of toilet emptying.

<sup>11</sup> WaterAid (2018) highlights the need for behaviour change communication, which is ongoing, informed by formative research, and adapted through close monitoring, to be considered as key factors when looking at hygiene from a systems perspective.

clear role of the service authority to provide sanitation and hygiene services. In this regard, strengthening stakeholder awareness and commitment on WASH, is critical for sanitation and hygiene.

- **Responsibilities for sanitation and hygiene can be poorly defined or overlapping.** Whilst water supply often (but not always) rests with one ministry and local entity, sanitation can be split across numerous ministries and entities, sometimes with overlapping or poorly defined mandates. Efforts to strengthen WASH systems will need to consider multiple ministries and consider more deeply the linkage with other sectors, such as health and environment.
- **Definitions vary on what is ‘included’ in the terms ‘sanitation’ and ‘hygiene’.** Whilst the definition of ‘water supply’ is relatively straightforward, it is more varied for sanitation and hygiene. Different sector actors may include or exclude aspects of sanitation and hygiene, according to programme focus or sector mandates<sup>12</sup>. This implies that the ‘boundaries’ of what may be included within the overall ‘WASH system’ needs to be carefully considered.

In the development of this paper, it became apparent that **there are similarities between sanitation and hygiene and domestic self-supply for water**<sup>13</sup>. Domestic self-supply is also often considered a private good, with corresponding implications on the responsibilities of households and service authorities, and thus similarities of service delivery models. Self-supply is also arguably another aspect of WASH that has received less consideration in WASH systems thinking to date.

### WHAT MODIFICATIONS ARE PROPOSED TO BETTER INCLUDE SANITATION AND HYGIENE?

From the analysis, the following modifications to the conceptual framework are proposed, to better capture sanitation and hygiene. Changes are presented in red in **Figure 2**, and described in the text below. It should be noted that some adaptations are proposed to generally strengthen the framework, applicable to all three WASH sub-sectors.

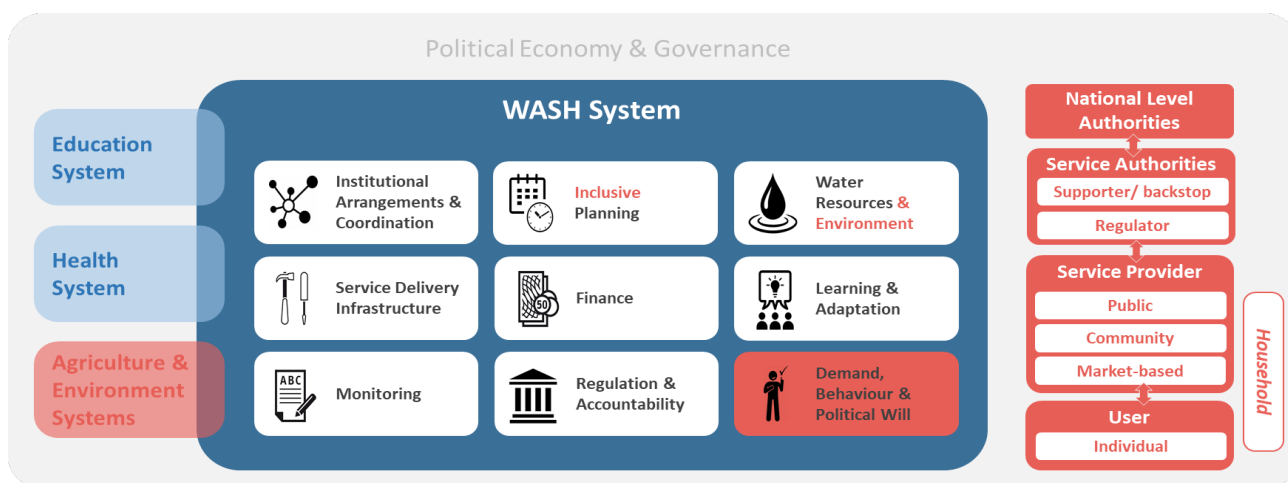


Figure 2: Adapted WASH Systems conceptual framework, proposed by the SSI. Source: Authors

**Building Blocks (factors):** It is proposed to (1) create a ninth building block focussing on ‘human’ and ‘dynamic’ factors, including demand (creation), and reflecting political will within the WASH system more explicitly,<sup>14 15</sup>; (2) to include ‘environment’ within the water resources building block, highlighting the interface between sanitation and hygiene and water, and potential resource re-use in FSM; and (3) to ensure inclusion issues are captured in the framework (see ‘planning’ building block)<sup>16</sup>.

**Actors:** To include ‘actors’ and ‘levels’ into the framework, which better represent these aspects of the system, and to highlight the importance of linkages between them<sup>17</sup>; to include (1) ‘users’ within the system, highlighting the criticality of user choice and behaviour; (2) to present different types of service provider, (3) to highlight the need to consider market-based players<sup>18</sup>; (4) to identify where further thought is needed as to whether households should be captured as a service provider and; (5) clarifying in the title that service authorities and national level authorities may be plural rather than singular, to highlight that WASH may cut-across multiple organisational mandates.

**Interface with other sectors:** To include reference to agriculture and environment sectors, to highlight important links between WASH and these sectors, particularly regarding the ‘closing the sanitation loop’ agenda.

<sup>12</sup> For example, is solid waste management and animal excreta included, or just human faecal waste? Is ‘sanitation’ relating to only toilets or the wider sanitation service chain? ‘Hygiene’ is not a single topic but refers to a number of sub-topics.

<sup>13</sup> An approach of incremental water supply improvements that are mainly financed by users (RWSN: [www.rural-water-supply.net/en/self-supply](http://www.rural-water-supply.net/en/self-supply))

<sup>14</sup> It is SSI’s experience that having factors captured within BBs may increase the chance of the factor being considered, analysed and addressed. As such, it is proposed to bring political aspects within the WASH system boundary into the BBs, to ensure it is considered.

<sup>15</sup> Behaviours, attitudes and commitment is captured in WSUP’s sector functionality framework, and WaterAid (2019) recommends ensuring dynamic factors such as political aspects are considered in systems analysis. SWA presents ‘Political Leadership’ as ‘an additional BB’.

<sup>16</sup> This aspect is valid for both water and sanitation, and should be captured in the framework. WaterAid has a specific BB on GESI issues.

<sup>17</sup> Whilst the concepts of levels and interactions between them is not new in systems thinking, it was not included in the A4C framework.

<sup>18</sup> Relevant for water supply, and particularly critical for sanitation, given the prevailing service delivery model.

Existing detailed lists of sub-factors which are stated to be critical to be in place behind each of the building blocks have been analysed. Adaptations to these building block sub-factors are presented in Section 7 of this report, which form a checklist that can be applied when analysing a WASH system<sup>19</sup>. **Figure 3** provides an overview of which key aspects are included per building block, building on earlier work of organisations in the sector.



Figure 3: Sub-factors within each Building Block. Source: Authors

## WHAT EXAMPLES ARE THERE OF SYSTEMS STRENGTHENING FOCUSING ON SANITATION & HYGIENE?

Having proposed a checklist for analysing WASH systems in Section 7, Section 8 of this paper presents examples of actions which organisations such as WHH could undertake to strengthen the various building blocks that make up the broader WASH system.

## CONCLUSION

This paper aims to contribute to the sector debate on how sanitation and hygiene can be better captured in WASH systems thinking. It is a discussion paper rather than position paper and does not seek to prescribe frameworks or practices, which will vary between contexts. The authors conclude with a call to action to the wider sector: to encourage organisations and governments to continue to evolve the scope and focus of WASH systems thinking, to capture elements and approaches which have received less attention to date, such as sanitation and hygiene<sup>20</sup>, and also water self-supply. They furthermore encourage greater dialogue between WASH systems thinkers and sanitation and hygiene communities of practice and call on organisations to document examples of systems strengthening in sanitation and hygiene and develop materials to guide practitioners. The authors would welcome constructive feedback on the content of this discussion paper and look forward to participating in any discussions that are generated from its publication<sup>21</sup>.

<sup>19</sup> SSI acknowledges the risks that WaterAid (2019) raised on using checklists. The checklist has been designed cognisant of their recommendation, and the checklist application by SSI aims to be adaptive through time. Further monitoring tools may be added in future.

<sup>20</sup> We also recognise that this paper focusses more on sanitation than hygiene and suggest a deep dive' on hygiene would also be useful.

<sup>21</sup> Feedback can be sent to Robert Gensch ([robert.gensch@germantolilet.org](mailto:robert.gensch@germantolilet.org)) and Will Tillett ([w.tillett@aguaconsult.co.uk](mailto:w.tillett@aguaconsult.co.uk))

# Examples of Sanitation and Hygiene Focussed Systems Strengthening Across the Building Blocks



Figure 4: Examples of actions to strengthen S&H aspects of the WASH system. Source: Author