

IRC

All systems go!

**BACKGROUND NOTE FOR
THE WASH SYSTEMS SYMPOSIUM**

**THE HAGUE, THE NETHERLANDS
12 - 14 MARCH 2019**



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All systems go! Background note for the WASH systems symposium

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Please cite this background note as follows:

Huston, A., Moriarty, P. & Lockwood, H., 2019. All systems go!: Background note for the WASH systems symposium. The Hague, The Netherlands: IRC

Published by IRC

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When we turn on a tap or flush a toilet, we rarely consider what lies behind these seemingly simple acts. We are blind to the complexity of our water and sanitation systems, and so we underestimate what it takes to provide us with water and sanitation services.

Systems are all around us, delivering essential services. Get on a bus, go to a hospital, drop your children at school, drive on the motorway – in each case, you are interacting with a system. In effective systems, people and organizations work with each other, and with money, policy, institutions, technology and the environment, to deliver services. The stronger and more developed the system, the more comprehensive and resilient the services it delivers. When they work well, systems are invisible to the people they serve; when they fail, the plane is cancelled, the electricity shuts down, the tap opens but no water comes out.

Water, sanitation and hygiene (WASH) are public services, vital to our collective welfare and development. As such, service delivery is understood to be a core responsibility of the state, whether the government provides the service itself or oversees or regulates its provision by others.

All systems that provide public services, in all countries, come under stress sooner or later, particularly when they face the challenges of limited financial, political or popular support. WASH systems are confronting these constraints even as demand grows and expectations of universal service take hold. In many countries, basic elements of the WASH system are simply missing: mechanisms are

not clear or accepted, individuals and institutions lack the resources to perform their functions.

In 2016, IRC and partners organised the Kampala WASH symposium, **From Projects to Services: WASH Sustainability through Whole Systems Approaches**. In the three years since, the understanding that we need to consider the WASH sector as a system has gained traction, and we have more experience – and experienced people and organisations – in what it means to take a systems-based approach. In March 2019 **All systems go!** will bring together people from all parts of the WASH sector to exchange ideas, learn from past experience and more clearly see how to move forward.

This background note sets out some key elements of our current understanding of WASH as a system and the evolution of systems thinking – why this is important and how we can use it to help achieve Sustainable Development Goal (SDG) 6, universal access to water, sanitation and hygiene services by 2030.

What progress have we made?

WASH access has improved: the Millennium Development Goal (MDG) for water was achieved before the 2015 target date, and progress was made in sanitation, though slower and starting from a lower base (JMP, 2015), even as the world's population grew from 5.3 billion (1990) to 7.5 billion (2015) (World Bank, 2017).

But progress is slow in the most fragile countries and the poorest regions. Even in countries that made significant progress towards the MDGs, many services are sub-standard: water infrastructure fails, water quality is poor, unemptied latrines leak contaminants into the environment. As we creep towards universal access, the challenge is to improve the quality and safety of current services while extending them to marginalised people and remote locations.



Figure 1: Theory of change for WASH sector

In the 15 years of the MDGs, primary school enrolment in low-income countries rose from 61% to 100% (World Bank, 2017). Three years into the SDG era, access to basic sanitation in the poorest countries is just 57% – lower than access to primary education in 1990. Now SDG6 sets an even more daunting target: universal access by 2030, with clearly defined service ladders (JMP, 2017). This would be challenge enough if the world were standing still. But with rising inequality, accelerating climate change, and continuing population growth and urbanisation, the service that meets people’s needs today must be adapted, expanded and transformed to meet their expectations tomorrow.

So why is WASH so difficult?

Firstly, WASH is just hard. It’s a technically complex service imbued with social and cultural significance. In some cultures water is considered a gift from God, and people are resistant to the application of market principles, like paying for piped drinking water and sewered sanitation. Yet even the most basic levels of service – point water sources and household latrines – require long and complicated supply chains. Raising low levels of service means more of everything: more money, more skills, more management, more regulation. These services have to be delivered to every child, woman and man in every household, school and workplace. Unlike other public services, such as education or health care, it’s not enough to provide a service and have people come to it – the service has to go to them.

Secondly, WASH requires political leadership. WASH is a public service to which all people are entitled, and government must either provide it or ensure its provision through investment, direction and regulation. The assumption of universality coupled with the recognition of water as a human right means that government’s responsibility is clear. With strong leadership and capable politicians and managers, success is possible. Countries as varied as Singapore, Korea (WaterAid, 2016), India (the Swatchh Bharat Mission¹) and Ethiopia show what can be done with strong political will. But in many countries, the WASH sector – sanitation, hygiene and rural water services in particular – remains a low political priority. Governments have essentially passed responsibility to international development agencies, NGOs, communities and small informal providers.

Thirdly, WASH needs a clear and agreed vision and framework. Countries and NGOs may be committed to universal access but often fail to answer the difficult questions: Access to what type and level of service? Provided by a public, private, or community entity? Against what benchmarks? Within what regulatory environment? Is government the supplier, investor, regulator or some mix? The result is a lack of clarity, particularly in rural and peri-urban landscapes, and a patchwork of ‘anything goes’, where sub-standard and unsustainable services are accepted as the norm, and where the poor and marginalised are left behind.

Those three systems challenges require systems-level solutions.

BOX 1: A SYSTEMS APPROACH TO WASH – CONCEPTS AND DEFINITIONS

WASH system: the whole network of people, organisations and institutions (actors) plus infrastructure, resources and behaviours (factors) that deliver WASH services. The WASH system exists within the wider political economy and interacts with other sectors (Huston and Moriarty, 2018).

Systems thinking: the understanding that it takes a whole system to achieve a given objective, and no individual component can succeed alone. This implies working with the system’s dynamic and constantly evolving nature.

Systems approach: any of a range of methodologies that use systems thinking to learn about and drive change. The common thread is an effort to make the entire system – its individual components and their interactions – more effective in achieving the desired outcome.

WASH systems approach: the understanding that WASH services are delivered and used in complex environments that interact with and influence those services, and that improvements require systemic change.

What's the value of a WASH systems approach?

Over the past two decades, the WASH sector has been evolving from emphasis on infrastructure to a focus on service delivery²: 'we don't fix pipes, we fix the institutions that fix the pipes'³. This shift is a natural response to learning what does not work, such as projects with short-cycle funding intended to deliver fast results, and models in which unpaid volunteers and households were supposed to manage engineering infrastructure.

More recently, a further shift in thinking has started to crystallise around a more explicit focus on the WASH sector as a complex system delivering WASH as a public service. This complements efforts to define and strengthen WASH's enabling environment and recognise the importance of social, political and economic factors. The advance in understanding has led to new insights, tools and interventions that improve our capacity for systems thinking, refine our understanding of local and national WASH systems and enhance our ability to drive systems change. Many organisations and platforms, both national and international, have anchored their approaches in this understanding will be present at **All systems go!**⁴

Thinking in terms of the systems necessary to deliver services is routine in health care and education, and other sectors as well have adopted ideas from systems thinking⁵. IRC believes it must also become a core competence of WASH actors, at all levels. **Systems thinking is the essential foundation for addressing the scale and ambition of the SDGs** and, ultimately, improving the health, well-being and overall life experiences of the world's people.

What do we know already?

IRC's work with a systems focus has led to six insights with practical implications.

1. Mapping the system shows the way.

Identify the stakeholders, incentives and power dynamics, both formal and informal, in a reflective exercise with thoughtful facilitation. Understand what others are doing and engage actively and constructively with them. Development partners are not 'external' actors: they are part of the system, and what they do – as well as what they don't – influences the system. Tested tools for mapping include WaterAid's Political Economy Analysis toolkit⁶ and the on-going work of

the Sustainable WASH Systems Learning Partnership⁷. Recognise your own place in the system, too: Can my work be scaled up within the existing political economy? Am I pursuing a systems-level change that can achieve a radical shift? Can my successes be sustained?

2. There are no silver bullets.

No single root cause drives failure in a complex system. There is no one solution or innovation that can solve systems-level challenges. Rather, a mix of elements (financing, regulation, legislation), models (private, public, self-supply), and networks (sector review groups, learning platforms) must all be improved together and in a manner suited to a country's unique political economy. Yet there are leverage points, both at the top, such as developing strong national political leadership (e.g., the OneWASH National Programme in Ethiopia⁸ or Swachh Bharat in India), and at the bottom, through demand creation and behaviour change (e.g., community-led total sanitation).

3. Good systems are the same but different.

A strong WASH system or systems change process cannot be replicated from a blueprint for a different context – what works in Accra may not work in Kolkata. Nevertheless, functioning WASH systems around the world do share some dynamics and behaviours that promote good performance: clarity of roles, transparency, accountability, adaptability and equity. Functional public service delivery systems all have core functions or building blocks; who fulfils them and how are entirely context dependent.

4. Collaboration is crucial and needs support.

Leadership for systemic change often involves multiple people, agencies and organisations working collaboratively from different perspectives. Identify and nurture the right partnerships and collaborations – those with the social or political capital to make change possible at scale. Getting the politics right and daring to work outside your comfort zone with new partners, such as politicians or civil society groups, can be a game changer. This is 'dancing with the system'⁹ – sticking to your principles while adapting and trying new things in the dynamic and humbling environment of complexity. Sustaining active collaboration requires a change hub, an organisation or organisations committed not just to a shared vision of change but also to supporting the process to achieve that change. Hubs convene partners, coordinate continual communication and manage knowledge to support insight and learning.

BOX 2: FROM SOCIAL ENTREPRENEURSHIP TO SYSTEMS ENTREPRENEURSHIP

Over the past decade, using small-scale, often local private providers to deliver water and sanitation services has received increasing attention. Success stories at the community or social enterprise level abound ... but why have few such enterprises become independent of their 'incubators'?

In a word, systems. Weak institutional and regulatory systems make it easy to experiment at small scale, essentially by flying below the regulatory radar. But scale requires finance, and finance hates uncertainty, and certainty comes only with clear policy, legislative and regulatory frameworks. Who wants to invest in a business if ownership of the assets or duration of a concession is unclear? District governments may welcome offers of a new water supply scheme from an NGO, but what bank will invest in a private entrepreneur seeking to build such a scheme if, in the end, the district can claim the assets and assign a new operator three years later?

Systems entrepreneurship means addressing the enabling environment necessary for an intervention and supporting its development while preparing your enterprise to scale. Unless the wider system is addressed, barriers will remain insurmountable, and the enterprise will never be financially viable – independent of social investors – and sustainable.

5. Change means experimentation and learning.

When we alter the system with an intervention – a new policy, or a new business model for service delivery – things change in both expected and unexpected ways. To harness the opportunities, it is essential to create space and allocate resources for collective reflection and continual learning, supported by good monitoring. Embedding experimentation within a well-structured framework for learning allows development of a shared understanding of the system and provides opportunities to catalyse change and influence its direction. The long-standing annual sector review process led by government in Uganda is a strong example of such collective 'pause and reflect'¹⁰.

6. Systems change is slow and hard.

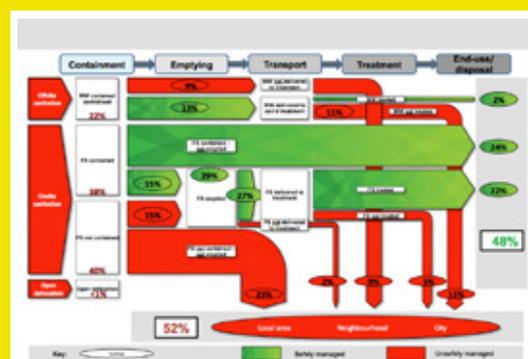
Change is the one constant in building resilient systems. To be effective, it needs to support and engage all parts of the system. The seed for systems change can

be found in many places – professional associations, ministries, and user groups, to name but three. What matters is that key sector actors are involved and multiple perspectives acknowledged. Learning and adaptation to realise change are long and often disheartening processes. Don't give up because some actors are resistant, slow, incompetent or corrupt. Recognise that such problems are as much symptoms as causes of underlying systems failure – and they can be addressed through systems-level solutions like building capacity, altering incentives and auditing.

BOX 3: FROM SYSTEMS THINKING TO SYSTEMS CHANGE

Strategic plan, action plan, district WASH plan: whatever the term, such documents are crucially important for setting out clear, nationally mandated routes to universal access. They should spell out, at an appropriate level of detail, both the desired end and the routes for getting there. Without these locally owned and politically supported documents that spell out a common vision, it is very difficult to undertake outcome-driven systems strengthening.

Both theory and practice tell us that sustainable service delivery requires strong national and local WASH systems, so an important starting point for improving a WASH system is comprehensive, multi-stakeholder national and local WASH planning. Assessment tools, such as shit flow diagrammes and life-cycle cost assessments, can be a foundation for developing a visioning document or master plan, which eventually must be supported by enabling policy, legislation and regulation. Several organisations have developed and applied such tools, including Water For People, which is working with the local government in Rulindo District in Rwanda (<https://www.waterforpeople.org/where-we-work/rwanda>).



There is no inherently right or wrong WASH system – except, of course, the one that fails to deliver an adequate service! Systems can uphold or prevent realisation of a society’s core values; a strong system meets its obligations for human rights, reliable services and environmental protection.

What will I learn at the symposium?

All systems go! aims to overcome the systems-blindness of the WASH sector and engage more holistically with a **national and local systems-strengthening agenda**. The symposium will present state-of-the-art thinking and practice about how to achieve SDG6. There are multiple approaches to understanding and working with systems; the symposium takes a flexible and outcome-focussed approach to identifying, sharing, learning from and amplifying successes.

Symposium presenters will explain whole systems conceptual frameworks for WASH and describe the latest tools for analysing and understanding system dynamics, plus technical tools for addressing specific parts of the system, including finance. Presentations will address capacity building, monitoring systems and strategy development. The symposium will showcase examples of systems in transformation, spark discussion about what still needs to change, highlight an agenda for action relevant to everyone, and jointly explore how we can become better systems leaders.

Systems are adaptive and evolve naturally over time, but purposeful change requires both leadership and collective action, to which we can – and indeed must – contribute if we want to see lasting change. It’s time to move beyond our own areas of specific expertise. We must be confident in engaging with and supporting the strengthening of WASH systems as whole.

References

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Further reading: The unabridged version of this background note includes a list of additional references and suggested reading for those interested in learning more about WASH systems strengthening.

Endnotes

1. swachhbharatmission.gov.in/sbmcms/index.htm.
2. A service delivery approach goes beyond infrastructure to focus on the service it provides to the end user, and what processes, resources, and life-cycle planning are needed to ensure the service. See www.ircwash.org/news/service-delivery-approach.
3. Junaid Ahmad, World Bank Chief of Staff, on the mission of the World Bank Water Global Practice. He attributed the statement to South Africa President Nelson Mandela.
4. Systems approaches are explicitly referenced in the strategies and policies of several institutions and collaborative networks, such as Sanitation and Water for All, the United States Agency for International Development (USAID) Local Systems Framework, the United Kingdom Department for International Development (DFID) Making the Most of WASH 2018–2030, and the WASH Agenda for Change. Please see the unabridged version of this background note for a complete list of references to other relevant documents in use in WASH.
5. For a historical overview of different branches of systems and complexity sciences, see interactive online map at www.art-sciencefactory.com/complexity-map_feb09.html.
6. WaterAids Political Economy Analysis Toolkit, washmatters.wateraid.org/publications/political-economy-analysis-toolkit.
7. Systems mapping techniques have been applied by partners in the USAID Sustainable WASH Systems Learning Partnership. See www.globalwaters.org/SWS.
8. One WaSH National Programme (OWNP) is a sector-wide approach (with both urban and water supply components) whose broad aim is accelerating WASH services in Ethiopia. See www.cmpethiopia.org/page/2694.
9. The concept of ‘dancing with the system’ was developed by systems thinking innovator Donella Meadows, along with 14 related ‘steps’ for changing systems. See donellameadows.org/archives/dancing-with-systems.
10. For reports from Uganda’s joint sector performance review process, see www.mwe.go.ug/index.php.

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