Photo credit: Plan Vietnam

Innovation Integration and Uptake

Learning Brief from research into effectiveness of WASH approaches and innovations in the Civil Society WASH Fund

The Civil Society Water, Sanitation, and Hygiene (CS WASH) Fund is a five-year programme supported by the Australian government with the objective of enhancing the health and quality of life of the poor and vulnerable by improving sustainable access to safe water, sanitation and hygiene. Between 2013 and mid-2018, the Fund will have supported 13 Australian and international Civil Society Organisations (CSOs) to deliver 29 WASH projects with an investment of AUD103 million across 19 countries. The Fund is expected to provide direct benefits to 3.5 million people and indirect benefits to over 10 million people.

Toward the end of 2017 the CS WASH Fund commissioned a team from Aguaconsult UK to conduct in-depth research of CSO interventions in four cross-cutting areas: i. WASH policy influencing; ii. Gender and social inclusion (GESI); iii. WASH market facilitation; and iv. Innovation integration and uptake. The researchers worked with Fund administrators to prioritise the CSO interventions by focusing on those which have displayed promising approaches in these themes. Working together, they prioritised 23 CSO interventions, with 43 different unique interventions across the four themes. This Learning Brief presents the key findings from the research in the area of innovation integration and uptake.[1]

---

1. The full research report can be downloaded at www.cswashfund.org/shared-resources/tools

HIGHLIGHTS

INNOVATION INTEGRATION AND UPTAKE

- The Innovation theme analysed 18 CSO interventions across 7 countries using conventions of commonly found innovation cycles, namely: (i) concept development, (ii) piloting and adapting, (iii) adopting, and (iv) scaling.

- For the purposes of this research, the definition of what constitutes innovation is the following: new approaches, methods, techniques, or technologies adopted and applied to WASH challenges, including the application of existing approaches to local challenges in new contexts – incorporating both original creation and adaptation.

- Essential components of innovation programmes include landscape analysis, funding sources, ownership and/or 'handover' plans, clarity of definition, learning objectives, programming for the cycle, and ensuring that beneficiaries - especially those with commercial benefit from the innovation - have "skin in the game".

- Resources are typically over-allocated to concepts and testing and under-allocated to adoption and scale.

- Innovation ownership is the pivot point on which sustainability and scale of an innovation rests.

- Scaling of innovations can take place in two ways: uptake by national sector actors or slow diffusion of an innovation from location to location or from sector actor to sector actor.
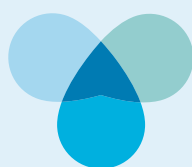
CIVIL SOCIETY
WATER, SANITATION
AND HYGIENE FUND

Australian Aid

www.cswashfund.org

Concept Development

Photo credit: Welthungerhilfe Zimbabwe

Concept development is the process of generating new ideas regardless of practicality with no wrong or right outcome. Consistent with this definition, innovations were placed into two broad categories: (i) good practices adapted from the global WASH sector new to the CSO or their country context, or (ii) untested solutions developed by CSOs new to the global sector which could be adapted for use elsewhere.

Adapted good practices included mobile monitoring, localised hygiene promotion techniques, latrine product design, training and capacitation of mechanics, pro-poor financing, faecal sludge management technologies, and incorporating environmental risk into a national sanitation demand generation programme. Untested solutions included using randomised control trial (RCT)

methodologies to evaluate distortion of pro-poor markets by Output-based Aid (OBA) subsidies and efficacy of new approaches to hygiene promotion; CSO investment of financial resources into creation of loan products and tools to target subsidies; and ongoing support to for-profit entities providing WASH products.

This range of innovations was developed or adapted to address some of the most intractable challenges in the global WASH sector, including: addressing the needs of the elderly and the disabled; meeting the financial needs of the extreme poor; supporting nascent businesses; supporting government-led pro-poor initiatives; and increasing the efficiency of CSO activities. Concepts of each innovation were reviewed and each was then assessed into the next stage of the innovation cycle, namely piloting and adapting.

Piloting and Adapting

Most CSO innovations supported directly by the Fund reached the piloting and adapting stage but did not advance further. Barriers of time, funding, and public sector capacity interfered with progress to the next level and serve as indicators of incomplete planning in innovation development. Innovations that addressed these barriers were most likely to progress further in the innovation development cycle.

In this stage, a prototype of an innovation was put into practice to test its ability to perform as intended and its potential to be replicated and learned from. During piloting, each innovation was tested on a small scale focusing on quality, validation, time, cost, adverse events and initial short-term impact. Because few of the CSO interventions advanced from this stage to the next, learning questions included the magnitude of its impact on WASH service delivery[2] and the barriers that prevented advancement.

Photo credit: WaterAid Papua New Guinea / Tim Davis

2. The research apply the following criteria to describe service delivery:
(1) Emphasising the life-cycle of both the hardware (engineering or construction elements) and software (capacity building, institutional support, financial planning) required; (2) Building local capacity, particularly the capacity of government, to operate, maintain, monitor, and report on improvements; (3) Defining roles and responsibilities for multiple actors working at different institutional levels and improving lines of accountability, coordination, and harmonisation among their activities; and (4) Applying indicators that cover aspects like reliability, affordability, safety and user satisfaction.

Although the majority of innovations had some impact, none were found to have changed WASH service delivery significantly; only one was found to have had no impact. Representative examples of aspects of service delivery improved by CSO innovations include the following:

- Habitat for Humanity Bangladesh improved sanitation access locally, established open defecation free communities, and documented 100% collection efficiency of a first round of loans made using CSO resources that established a locally-managed pro-poor household sanitation revolving fund;

- iDE Cambodia applied RCT methodologies to investigate the role of "smart subsidies" in market expansion, supported existing for-profit entities, and introduced or piloted new sanitation products;

- Plan Vietnam integrated Water Safety Planning into government-led sanitation demand programmes incorporating water protection, treatment before delivery, protection during distribution, safe storage at home and wastewater management into a Multi-layered Barrier Approach to safe water management (see Figure 1);

Figure 1: Innovative Multi-layered Barrier Approach to safe water management


Credit: Plan Vietnam

- SNV Bhutan improved behaviour change communication programming nationally as well as its local application in outreach clinics for mothers;

- Thrive Networks began to tip the scale in favour of government-provided pro-poor sanitation subsidies;

- WaterAid brought a mobile monitoring device to the level where it provides rapid and credible information on their programme; and

- Welthungerhilfe Zimbabwe established locally certified "proactive plumbers" (known as "WASH Wizards") whose workforce includes both women and men.

Each of these examples of innovation had a partial positive impact but stopped short of full uptake into the national service delivery systems of water supply, sanitation or hygiene promotion by either remaining at the local or regional level or only impacting one aspect of service delivery.

The most common barriers to uptake and advantageous positioning to improve service delivery should have been addressed during the concept development stage. The research found that the three most common barriers relate to challenges of funding, time and the capacity of government for uptake (see Figure 2).

Figure 2: Barriers to uptake of innovation cited by CSOs
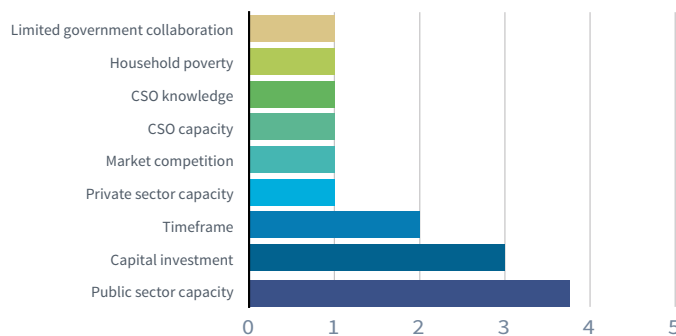
The following innovations were designed to account for at least some aspects of these barriers and progress to the next stage of the cycle was noted:

- SNV Bhutan's evidence-based behaviour change communication approach became part of an existing national programme aligned with existing regulations and sector guidance (see Figure 3);

- Welthungerhilfe in Zimbabwe advanced its plumbing entrepreneurs into the national registration system; and

- Plan Vietnam's consideration of environmental risk and better meeting the needs of ethnic minorities were incorporated into a national community-led total sanitation programme.

An important element that set the stage for addressing these barriers was the elucidation of an exit or "handover" strategy, wherein the innovation launched by the CSO becomes the practice of the service delivery system, separating the CSO from the innovation. The absence of a handover strategy was the most frequently cited interference to adoption of an innovation beyond the timeframe of the CSO intervention.

Figure 3: One example of SuperAmma hygiene behaviour materials adapted for use in Bhutan

Photo credit: SNV Bhutan

Adopting

Completion of this stage is linked with ownership of an innovation. Ownership by government, the private sector or other sector stakeholders makes adoption and deployment at scale more likely. Ownership by a CSO was found to hamper cycle completion. Funding was spent far more on innovation creation than on innovation diffusion limiting options for ownership. And, if an innovation appears viable, then investment from beneficiaries of the innovation should follow, but this was never seen to be the case in the examples researched under the Fund.

In the adoption stage, rollout beyond the limits of CSO programming can be achieved with ownership transferring to one or more actors in the service delivery system. Learning questions for this stage included checking overall status, identifying current owners of the innovations, characterising networks through which advocacy for the innovation might occur and identifying the common roles played by CSOs in advancing through the innovation cycle.

Several innovations advanced beyond the pilot or adaptation stage. "Good practice" innovations that advanced included mobile monitoring by WaterAid, application of environmental risk methodologies, and improved sanitation product designs by several CSOs, most prominently by iDE Cambodia. "Newly developed" innovations that advanced include smart sanitation subsidies in Cambodia, based on OBA rebates tested by Thrive Networks and findings from iDE Cambodia's RCT market research.

Innovation ownership is the pivot point on which sustainability and scale of an innovation rests. If an innovation that started under CSO ownership stays under CSO ownership, then the resources of the CSO, and therefore by extension external donors, are required to ensure the innovation advances to the final stage of the cycle. This was the case for most of the innovations that reached the adoption stage. If government, the private sector or other sector stakeholders adopt and resource an innovation as part of its standard delivery of WASH services, then advancement is more likely. Ownership of SNV's behaviour change methodology and

Plan's environmental risk methodology was transferred to the national government.

Of equal interest are the investments required to operationalise an innovation. The observation that such costs are rarely considered was highlighted when CSOs were asked to identify relationships and/or networks that were needed to help their innovation succeed. The importance of external investment and specialist expertise not found within a CSO became clear. The reliance of CSOs on external specialists and funding should be a concern to donors as they weigh the cost of innovation support against the anticipated outcomes. In addition, having donor funding positioned the CSOs to freely experiment to whatever degree they wished with no risk of financial loss due to innovation failure. This could be viewed as a positive in that it positioned them to take creative risks, or as a negative as there was no risk to the CSO from a poorly executed innovation.

Of note overall is the absence of private sector investment in any of the innovations in the portfolio under review. This is especially significant when considering that the private sector is frequently the beneficiary of innovation and development (e.g. product design). While producers affiliated with iDE Cambodia were often investors in the equipment needed to manufacture products developed under project funding, an interesting experiment in future would be to identify private sector investors to contribute to innovation development in exchange for, for example, a unique market relationship with the result of the innovation.

Photo credit: iDE Cambodia

An innovation's success was shown to depend on multiple skill sets. The data on the roles that CSOs played in the development of innovations shows that some CSOs took on all roles within the cycle, whilst others focused more on particular aspects. The clear strength of CSOs, as shown in Figure 5, is in identifying a challenge, creating or "visioning" solutions, and promoting end use. CSOs also acted as contractors, particularly for expatriate technical assistance but all too often CSOs ended up being the owner of an innovation that was not taken up by other actors in the service delivery system. Of particular note is the limited identification in the data of the CSO playing a role as trainer as part of handover of ownership.

Figure 5: What roles have CSOs played in supporting WASH innovation, demonstration and uptake?
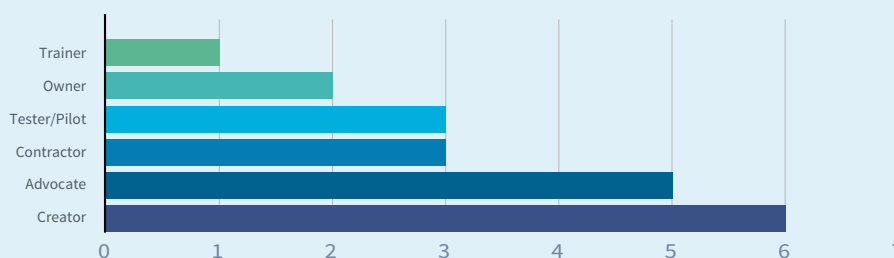
Scaling

Photo credit: Thrive Vietnam

Scaling of innovations can take place in two ways. The first, uptake by sector actors in support of a national programme, was observed. The second, more subtle and less frequently discussed pathway, is the slow diffusion of an innovation from location to location or from sector actor to sector actor. The former can be seen within common project time frames; the latter is less likely to be observed within conventional project time frames and may require longitudinal tracking.

The research team found two innovations launched under the CS WASH Fund achieving scale within the timeframe of the programme. SNV Bhutan's adaptation of an Indian-originated behaviour change methodology and Plan Vietnam's environmental risk approach are adaptations of good practice that have become standard elements of national, at-scale programmes. Of additional note,

iDE Cambodia's for-profit internal entity and separately its network of product suppliers have reached credible levels of scale and are poised for larger scale influence beyond the CSO's target locations, but the initial development of the at scale operations was established before being supported by the CS WASH Fund.

While most innovations did not complete the innovation cycle, there is evidence that several have begun radiating out from the CSO originator. The research uncovered a rarely discussed aspect of scale: the

incremental, and frequently slow, uptake of an innovation by other sector actors. Incremental uptake beyond the developer, as shown in Figure 6, indicates non-conventional success in scaling. This potential should not be overlooked when developing programmatic indicators of uptake and scale for innovations, as it appears beneficial to allow time for innovations to be taken up into the normal practice of practitioners and national authorities.

Figure 6: What organisations other than the funded CSO are making use of the innovation in their programming?
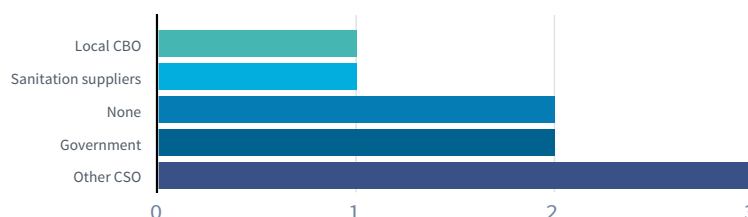
Main findings

"Innovation" tends to be over-labelled:	Innovation ownership is a deal-breaker for scaling:	There can be merit in failure and partial implementation:	There are clear and common barriers to innovation success and uptake:	End users did not have significant investment in innovations:
Care must be taken to establish a clear and commonly accepted programmatic definition of "innovation", particularly before providing external support. Innovations can be products or processes, but one organisation's innovation is another organisation's slightly different way of addressing a challenge.	Innovation ownership is the pivot point on which sustainability and scale of an innovation rests. If an innovation started under CSO ownership stays under CSO ownership, then the resources of the CSO – and therefore by extension external donors – are required to ensure progress through the innovation cycle. If government, the private sector or other stakeholders have adopted and resourced the innovation as part of WASH service delivery, then completion of the cycle is more likely.	Benefit and learning can be found from efforts that do not complete the cycle. But, this is only the case when the innovation is designed to provide learning or address a hypothesis that can tolerate failure or partial completion.	Too many innovations studied failed due to poor planning: (1) insufficient critical assessment of the capacity of the public or private sector – the ultimate facilitators of scale and uptake; (2) lack of budgeting to cover innovation needs from development to end point, and (3) inadequate consideration of the time required to bring an innovation to maturity.	The innovations studied were each developed by CSOs using external financing, essentially "free money", without incentives for success or scale or penalty for failure. This arrangement allowed CSOs to define their own success points and take higher risk gambles than would be expected if they had more "skin in the game" that made them accountable for risk and failure. Failure, in most cases studied, was allowed to happen without learning or responsibility.

Recommendations

- Settle on a functional definition of "innovation" that addresses issues of adaptation, uniqueness, potential of sector application, end point, and ownership.

- Future efforts at innovation support should ensure that reasonable and defensible estimates of time, cost and capacity are provided in advance of funds being granted.

- Future efforts to support innovation should ensure that budgets are allocated equitably to each stage of the innovation cycle from concept design and testing through to the identified end point.

- Future efforts could include accommodation for risk and failure, but they should specify how findings from failure would be captured and put to beneficial use.

- In future commitments to support innovations, those expected to benefit from an innovation should invest in its development. Investors could include both the CSO and private sector actors that may benefit from the success of the innovation. Their "skin in the game" should drive innovation further toward end points, user ownership, and sustainable operation than does reliance on "free money" from donors.

CIVIL SOCIETY
WATER, SANITATION
AND HYGIENE FUND

Australian Aid

Palladium
MAKE IT POSSIBLE

AGUA CONSULT

The CS WASH Fund is supported by the Australian Government and managed by Palladium.