In 2015, at the close of the Millennium Development Goal (MDG) period, 2.4 billion people lacked improved sanitation facilities and almost 700 million still used unimproved sources of drinking water. Despite several decades of concerted efforts taken by several nations and international agencies to provide basic water, sanitation and hygiene (WASH) services and facilities, progress was slow and intermittent.

The MDGs specifically addressed inadequate access to safe water and sanitation, spurring significant progress. In the last two decades, more than 2 billion people have gained access to improved drinking water and sanitation. However, progress towards universal access to WASH has been uneven. For example, open defecation is still practiced widely, especially in South Asia and Sub-Saharan Africa.

Approaches to identifying WASH beneficiaries and understanding their needs and requirements are based on segmenting a population according to a set of criteria. These approaches have evolved. Initially, governments started with the overarching objective of providing universal access to WASH services. This approach became more nuanced towards ensuring equitable access by meeting the needs of specific population segments in settings specifically targeted under the MDGs.

During the MDG period, WASH programme beneficiaries were broadly categorised in one of two ways. Populations targeted by geographic and socio-economic segments were classified on the basis of rural or urban location and income, with less attention to age, sex or ability. Populations targeted using the human life-cycle segment approach were classified according to sex, age, disability status or HIV status.

Under the Sustainable Development Goals, greater attention to targeting by life-cycle segments will be needed to reach universal coverage. However, evidence of the effectiveness of either or both of these approaches in reaching different populations is limited.

Annamalai and colleagues conducted a systematic review of how WASH policies, programmes and projects used these different targeting approaches. The authors examined barriers to accessing WASH services and strategies to improve access and benefits resulting from those efforts. They are the first to use a life-cycle lens to systematically analyse the WASH portfolio of policies, programmes and projects to find and synthesise evidence on the extent of efforts to provide services for disadvantaged and vulnerable populations.

**Figure 1: WASH needs at different stages of the human life-cycle and by vulnerability**

Note: While the characteristics have been separated to illustrate the two targeting approaches, in practice they intersect.

Source: Annamalai and colleagues

**Figure 2: Countries covered by the systematic review**

Source: Annamalai and colleagues
Inadequacy of WASH services or facilities, inaccessibility (time and distance) and attitudinal barriers (lack of knowledge and awareness) were the most commonly identified factors affecting WASH infrastructure access across geographic and socio-economic and life-cycle segments. The most frequently identified barriers differed across Asia and Africa. Policies in Asia frequently identified inadequacy and inaccessibility for life-cycle segments, whereas in Africa, attitudinal barriers were identified more frequently. For geographic and socio-economic segments in South Asia, inaccessibility was the most frequently identified across WASH policies in both regions, whereas inadequacy and inaccessibility were more common in Sub-Saharan Africa. However, Asian and African countries exhibited similar patterns in identifying barriers to WASH when it came to programmes and projects. Among programmes and projects using life-cycle segments, barriers were most frequently identified for children.

Assessing barriers, strategies and benefits in the WASH portfolio

Annamalai and colleagues developed an index to capture the extent to which barriers, strategies and benefits were identified in the WASH policies, programmes and projects. The index uses yes or no to record mention of one, two or all of these elements, with a maximum score of 8. The higher the score, the more robust the authors consider the approach to be, considering all of these essential elements explicitly. Overall robustness index scores were higher for geographic and socio-economic segments (6.8) as compared to life-cycle segments (4.5). Policies, programmes and projects in Asia had higher index values than those in Africa. Analysis by WASH sub-sector showed that sanitation had the highest index values and hygiene the lowest. Policies were more comprehensive than programmes and projects in considering the pathways of barriers, strategies and benefits. This suggests that life-cycle segments and geographic and socio-economic segments thinking is not always being translated from policies into programmes and projects.

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Conditions facilitating adoption of life-cycle and geographic and socio-economic segments

The extent to which life-cycle and geographic and socio-economic segments were adopted varied by WASH sub-sector and by the agency drafting a policy or implementing an intervention. Between the three sub-sectors, life-cycle benefits were included more often in policies related to sanitation and hygiene than for water, despite the consequences of decisions about access to water disproportionately accruing to women and girls. Evidence indicates that programmes and projects funded by multilateral agencies aided the adoption of life-cycle segments during implementation. Similarly, community participation also played an enabling role in the adoption of life-cycle targeting.
Implications for improving targeting complementarity in the WASH portfolio

- Life-cycle and geographic and socio-economic targeting complement each other in improving WASH services. Although geographic and socio-economic segments have traditionally been the dominant paradigm, adopting life-cycle targeting has increased in recent years. According to the World Health Organization and the United Nations Children’s Fund, the benefits of increasing access to WASH services can only be realised by all segments of society when the needs of marginalised people are addressed. In this context, systematic steps are needed to incorporate life-cycle principles in the current geographic and socio-economic targeting approach in order to realise the complementarities of both these approaches in improving effectiveness of and equity of access to WASH interventions.

- Life-cycle targeting enables a decentralised and demand-driven framework for achieving WASH objectives, as compared to centralised, supply-driven approaches suggested under geographic and socio-economic targeting approaches.

- The extent to which life-cycle or geographic and socio-economic population segments are considered in programmes and projects could be greatly improved when WASH policymakers and funding agencies highlight the importance of both approaches.

Policymakers and implementing agencies can improve implementation for specific populations by ensuring that key documents are explicit about the interdependence of specifying barriers to access, proposing specific strategies to address them, and listing the types of benefits for each population.

Multilateral agencies have played an important role in the inclusion of life-cycle segments and in the identification of benefits for these populations. This shows that expertise, as well as the credibility of an external aid agency, can play a crucial role in the adoption of life-cycle targeting in the sector.

What is a systematic review?

3ie-funded systematic reviews use rigorous and transparent methods to identify, appraise and synthesise all of the qualifying studies and reviews addressing a specific review question. Review authors search for published and unpublished research and use a theory-based approach to determine what evidence may be generalised and what is more context specific. Where possible, cost-effectiveness analysis is done. The result is an unbiased assessment of what works, for whom, why and at what cost.

About the review

This brief is based on 3ie-funded Systematic Review 35, *Incorporating the life-cycle approach into WASH policies and programmes*, by Thillai Rajan Annamalai, Sriharini Narayananan, Ganesh Devkar, Venkata Santhosh Kumar, Reeba Devaraj, Akshaya Ayyangar and Ashwin Mahalingam. The paper systematically identifies and examines evidence from WASH policies, programmes and projects across 11 WASH priority countries from South Asia and Sub-Saharan Africa during the MDG period (2000–2015). The authors synthesised evidence from 59 policy documents and 131 programme and project documents using numerical summary techniques and qualitative comparative analysis.

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