


Local leadership development and WASH system strengthening: insights from Cambodia

Tum Nhim ^{a,b,*} and Claire Mcloughlin^c

^a Center for Natural Resources and Environment, Cambodia Development Resource Institute, Phnom Penh, Cambodia

^b WaterSHED Asia, Phnom Penh, Cambodia

^c International Development Department, University of Birmingham, UK

*Corresponding author. E-mail: um.nhim@cdri.org.kh

 TN, 0000-0002-0511-4141

ABSTRACT

To accelerate progress towards achieving the Sustainable Development Goal on clean water and sanitation, the focus of WASH programming in developing countries has shifted from a traditional infrastructure approach to a more systems-based approach. Greater emphasis on a systems approach has also drawn attention to the significant role played by local leadership in developing sustainable WASH systems. Building on the evidence of the effectiveness of leaders trained through the Civic Champions Program, an innovative leadership development program in Cambodia, this article examines leaders' characteristics and explores how participating in the program affected their capacity, skills, and perceptions of leadership. Crucially, it seeks to understand the extent to which participants in the Civic Champions Program differ from comparable local leaders along these dimensions. By combining survey data with qualitative analysis, the paper identifies how localization enhances the effectiveness of leaders in promoting sanitation, including working through and strengthening pre-existing institutional arrangements and adapting promotion strategies to different audiences. In this way, the article demonstrates how non-prescriptive programs that tap into the legitimizing potential of local leaders may contribute to addressing sanitation challenges and ultimately to WASH system strengthening.

Key words: Cambodia, civic champions, local leadership, system strengthening, WASH

HIGHLIGHTS

- This article examines leaders' characteristics and explores how participating in an innovative leadership program affected their capacity, skills and perceptions of leadership.
- Localization enhances the effectiveness of local leaders in promoting sanitation.
- Legitimizing potential of local leaders may contribute to addressing sanitation challenges and ultimately to WASH system strengthening.

1. INTRODUCTION

1.1. Background

The focus of WASH¹ programming in low-income settings has shifted from a traditional infrastructure approach to a systems-based approach (Hollander *et al.* 2020). Donating or heavily subsidizing fixed infrastructure such as latrines, handwashing stations, or water points and handing over them to local communities has ultimately proven unsustainable and could undermine the progress towards achieving Sustainable Development Goal 6 (Foster 2013; Schouten & Moriarty 2013; Agenda for Change 2020). Instead, WASH service delivery is increasingly analyzed as a complex system of interactions between financial, institutional, environmental, technological, and social factors (Huston & Moriarty 2018; Agenda for Change 2020; Valcourt *et al.* 2020). In this vein, system interventions work to address specific blockages by strengthening relationships between key actors and stakeholders inside and outside of government (Jenkins *et al.* 2019). Albeit less quantifiable than traditional

¹ Water, Sanitation, and Hygiene.

hardware investments, the value of these approaches is that they place greater emphasis on the actors, networks and behaviors that are key to unlocking progress (Hollander *et al.* 2020).

Greater emphasis on a systems approach has drawn attention to the significance of leadership in driving collective action. Water and sanitation management are highly technical tasks that typically require co-ordination across and co-production between multiple ministries, organizations, communities, and individuals. Given the potential for institutional fragmentation, leadership can play an essential role in creating a coherent vision at both national and local levels (De Montalvo & Alaerts 2013). Leaders can act as change agents by instilling a sense of purpose, aligning efforts and resources around a shared goal, and mobilizing local communities (De Montalvo & Alaerts 2013). Though high-level political commitment can influence the enabling environment, the work of subnational, district, and community leaders is often vital, particularly in decentralized delivery systems.

The role of effective leadership in making change happen raises important questions about where individual leaders come from, how they operate, and what donors can do to strengthen their capacity. What motivates individual leaders to engage in WASH activities? How do they navigate and work effectively within the WASH system? And crucially, in what ways can they be supported through training or capacity development? This article addresses these questions by analyzing the characteristics and strategies of participants in a local leadership programme developed and implemented by the local NGO, WaterSHED Cambodia. As part of its work to strengthen the WASH system and build a rural sanitation market, WaterSHED developed an innovative approach to incentivizing and supporting local leadership called the Civic Champions Program (Jenkins *et al.* 2019). Internal and external evaluations of this program have shown that participation led to tangible outcomes in accelerating latrine sales in participating communes, while also increasing participants' commitment, perseverance, and community recognition for their work (WaterSHED 2014; McLennan 2016; Bartell *et al.* 2020; USAID 2020).

Given the evidence of the effectiveness of leaders trained through Civic Champions, this article seeks to delve deeper into understanding their characteristics and strategies. It explores how participating in the program affected their capacity, skills, and perceptions of leadership. Methodologically, it compares the extent to which participants in the Civic Champions Program differ from comparable local leaders along these dimensions. By combining survey data with qualitative analysis, the paper identifies ways in which localization enhances the effectiveness of leaders in promoting sanitation, including their ability to work through and strengthen pre-existing institutional arrangements and adapt their promotion strategies to different audiences. Women are found to be particularly adept at this adaptation. Collectively, these findings attest to the value of localizing leadership development programs that are not prescriptive but rather allow local leaders to navigate local institutional and cultural repertoires and use their embedded legitimacy to drive change. Locally legitimate leadership can contribute to addressing sanitation challenges and ultimately to more sustainable WASH system strengthening.

1.2. Local leadership for WASH system strengthening

In 2021, the UN reported that the world is off track to meet SDG 6: two billion people still lack access to safely managed drinking water and 3.6 billion to safe sanitation (United Nations 2021). One of several priorities identified in the Global Acceleration Framework is developing stronger 'political will' for change. While 'political will' is often used as shorthand for high-level commitment to reform, in practice, sustainable WASH systems require effective leadership at multiple levels: individual, collective, and societal (McLoughlin *et al.* 2021). At the individual level, progress relies on motivated and strategic individuals with the incentives, values, and opportunity to act. At the collective level, co-operation and communication between the multiple stakeholders involved in coordinating service delivery are vital. At the societal level, successful uptake and management of WASH facilities requires leaders to influence the attitudes, beliefs, and social norms that shape behaviors.

Albeit patchy, there is evidence that effective leadership can make a difference at each of these levels. Countries that have already achieved total sanitation and hygiene coverage share a similar leadership story: strong national leadership with an aspirational vision; a whole-of-government approach that devolved leadership functions to the local level; a degree of autonomy for local-level innovation and adaptation; and a commitment to diagnosing and resolving bottlenecks (Northover 2020). In these cases, leadership has played a decisive role in translating political intentions into practice (Northover 2020). At the local level, effective leadership has also been identified as a key driver of more successful community management of water supply (Hutchings *et al.* 2015). Training

motivated community members to support the roll out of community-led systems can improve their sustainability (Crocker *et al.* 2016). The characteristics of local leaders – for example, their gender, age, and length of tenure – are significant in determining their impact (Sun *et al.* 2010).

While studies highlight the difference effective leadership can make to WASH outcomes, the mechanisms via which local leaders produce these effects are less well understood. Some studies suggest the strategic contribution of local leaders lies in their ability to use their social capital to help overcome collective action problems and facilitate attitudinal and behavioral change (Dickin *et al.* 2017). For example, in India, ‘natural leaders’ – individuals motivated to change social norms – have helped to make change more locally legitimate and sustainable. In this case, community members appreciated listening to someone of their own community talk about their everyday habits (Bejjanki 2016). This suggests that one of the key transformational qualities of local leaders is that they can navigate within local cultural repertoires.

To further explore the factors that enable local leaders to operate in these ways, we draw on concepts from the wider leadership literature. Leadership is understood as the set of skills and attributes acquired through lived experience, rather than an innate ability (Hartley 2014). We investigate this by exploring the backgrounds of individual leaders, their education, and socioeconomic status and evaluate this against their self-reported leadership skills. Mindful that leaders cannot pursue change without also influencing followers (Hudson & McLoughlin 2019), we also investigate their leadership styles and the strategies they use to promote sanitation uptake. This reflects a leader-centered approach advocated by Corbett (2019), who argues ‘if we want to understand what motivates leaders to initiate progressive change, we have to start with the way they understand the world and the choices it presents them’. A leader’s identity, background, and socialization can each determine their motivation to pursue change, the choices they make about how to deploy resources and resolve dilemmas. Crucial to our study is understanding how access to training, skills, and networks can broaden the menu of choices leaders have.

1.3. WASH leadership in the Cambodian context

Cambodia has made significant development strides over the past decade, including in meeting the Millennium Development Goals around access to improved sanitation and drinking water (World Bank 2017). Nevertheless, as a country aspiring to middle-income status by 2030, access to improved water and sanitation facilities remains off-target (World Bank 2017). Stark disparities between urban and rural areas persist. 61% of the rural population has access to basic sanitation, compared to 93% of urban Cambodians (WHO 2021). 57% of the urban population is using improved water supplies, compared to 42% in urban areas. UNICEF estimates that 8 in 10 of the poorest rural Cambodians still practice open defecation (UNICEF 2019). Capacity gaps in government staff, inadequate budget allocations, dependence on external support, the absence of a joint roadmap across ministries, and limited enforcement of regulations on private sector providers limit progress on inclusive WASH provision and sustainability.

In Cambodia, local government leaders are especially relevant for addressing these challenges. Elected Commune Councilors (CCs) have a mandate to support the government’s effort to reach universal sanitation coverage by 2025. As laid out in the National Action Plan on Rural Water Supply, Sanitation and Hygiene 2019–2023, Commune Councils and the Commune Committee for Women and Children are the key implementers at the lowest level of the government (Ministry of Rural Development 2019). Local leaders are perceived by villagers as individuals who can be relied on, represent them, and help them solve conflicts or support their everyday needs (Thon *et al.* 2009). While there are many types of local leaders, commune chiefs, councilors, and village leaders (chiefs) are often considered the most important within the community (Thon *et al.* 2009).

Leadership is always situational, in that it is shaped by wider cultural factors and socio-political institutions (Dickson *et al.* 2012; Dorfman *et al.* 2012). The political environment for leadership in Cambodia is therefore significant. Cambodia is considered a high ‘power distance’ country, in which hierarchical social relationships create inequality in power and make it socially unacceptable for inferiors to challenge superiors (Chan & Chheang 2008). Decentralization, which requires local commune leaders to exercise a degree of autonomy in decision-making, is challenging in this cultural context (Chan & Chheang 2008). At the same time, local leaders draw social capital from local familial and social networks. Previous research has found that CCs express a strong public service ethos and civic drive to develop their community (McLennan 2016). They often have prior experience of engaging in public services and building rapport and local legitimacy (Ly 2016). Hence, if motivated and equipped with the right skills and knowledge, they hold significant potential to unlock local development

challenges (McLennan 2016). Despite this, CCs, particularly women, also perceive themselves as lacking the experience and knowledge to exercise their roles effectively (Thon *et al.* 2009; McLennan 2016). In this way, CCs are a strategically important group of leaders with untapped potential.

1.4. About the civic champions program

Civic Champions aims to foster transformative local leadership by supporting the leadership potential of elected CCs. The program enables them to drive their own process of developing leadership skills and strategies through cyclical training, implementation, and coaching. Further, CCs voluntarily apply to join the program and pay a participation fee. Through peer learning and coaching, participants are self-motivated to create their own vision for change in their respective communities, develop an action plan, and execute against it. In this way, the program encourages the development of soft skills but closely ties them to the delivery of tangible results. Civic Champions also directly engages subnational government staff at all levels as facilitators, advisors, and advocates. In effect, it aims to build a supportive enabling environment, at multiple levels, to enable leadership to work effectively at local level.

In the Civic Champions Program, the process of supporting individual leaders happens through three phases. During **'Discover'** conferences, each commune team is trained on general leadership skills and sets a target for the number of new, pour-flush latrines they will achieve in their commune in the next three months. In the three-month **'Develop'** period, commune teams conduct various sanitation promotion activities as they work toward their latrine target. The program is not at all prescriptive about activities, processes, or stakeholders that commune teams should leverage. The way they reach their target is entirely up to them. Thus, each commune team represents a natural experiment in sanitation promotion strategies that they feel are the best fit for their local context. At the end of the three-month period, we enter the **'Deliver'** phase. WaterSHED's monitoring and evaluation team summarizes latrine data from the communes to determine which communes met their targets². Leaders that met their targets are eligible to compete for a cash award. The cash comes from the program participation fee collected from each participant. Eligible communes must present their sanitation promotion strategies including which leadership skills they used, which stakeholders they involved, and the challenges they faced. Their peers, the fellow program participants, are allowed to ask questions and then cast a vote for the best strategy and presentation. The cash reward for winners comes out of the program participation fees.

The core program package is illustrated in Figure 1. WaterSHED piloted the Civic Champions program in 2013–2014 and subsequent research and evaluation found that participating communes achieved greater acceleration in sanitation uptake compared to non-participating communes (Bartell *et al.* 2020). The participating communes saw a 400% increase in sales of improved latrines (WaterSHED 2014). As a result of its success in outcomes and engagement, the program was then scaled up and implemented in selected districts across a further eight provinces in 2015–2016. Through this process of scale-up, the program generated increasing government engagement, such that it was eventually jointly facilitated with government (2018–2019). By 2020–2022, the program was fully led by government and extended to all communes within eight provinces³ (see Table 1).

2. METHODOLOGY

2.1. Data collection and processing

We use a non-experimental approach to analyze the effect of Civic Champions on leaders' characteristics and capacity, and their styles and concept of leadership. To test this, we compare outcomes between Civic Champions participants (the 'Civic group') and CCs who did not enroll in this specific program (the 'non-Civic group'). In order to reduce selection bias, we compare leaders in the Civic group with leaders in communes with similar characteristics to those joining the program, but who were not exposed to any similar leadership training program. To increase comparability, one of the key selection criteria for non-civic communes was the presence of a local NGO implementing a sanitation marketing program. This is taken as a contextual indicator that CCs in both groups face similar sanitation challenges. Other commune characteristics used as selection criteria

² In the latest iteration led by the government (2021–2022), the program's monitoring and evaluation was conducted by the government with support from WaterSHED team.

³ Takeo, Kampong Cham, Tboung Khmum, Kampong Chhnang, Battambang, Pailin, Pursat, Kampong Speu (see Table 1).

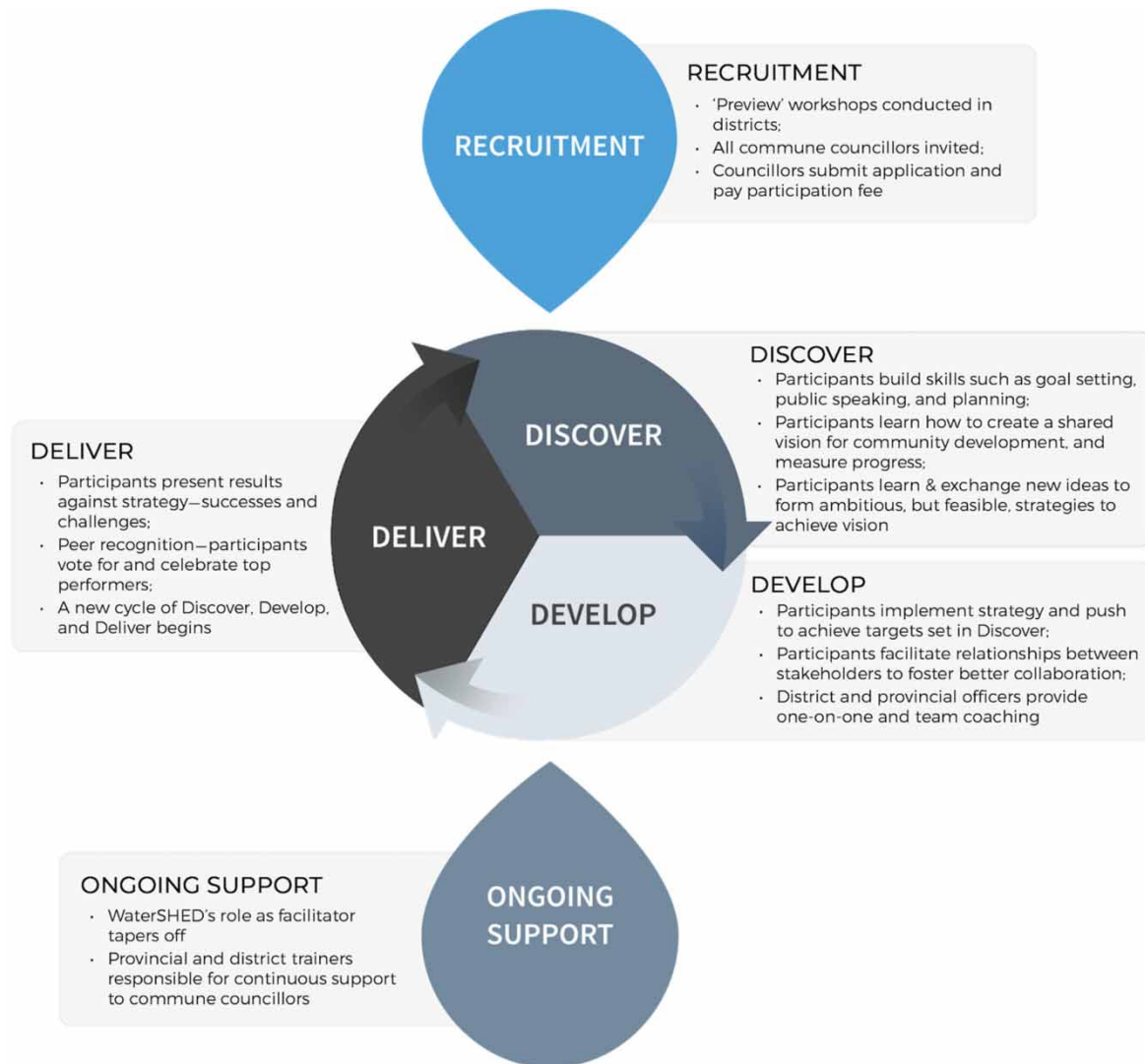


Figure 1 | Overview of Civic Champions Leadership Development Program.

Table 1 | Iteration of civic champions

Iteration	Pilot	Scale-up	Light	Hybrid	Government-led
Year	2013–2014	2015–2016	2017	2018–2019	2020–2022 (2018–2019)
Districts	2	16	30	18	66
Communes	20	105	204	144	589
Participants	46	203	375	254	1,243
Training cohorts	1	6	30	6	7
Facilitators	WaterSHED	Joint	Joint	Joint	Government

include commune size, distance from the district town, and percentage of ID poor⁴. Overall, both groups are comparable in terms of geographic, economic, and social characteristics, but we have no information on the different levels of commitment and motivation of district and provincial government that may influence the perception and motivation of commune leaders about their mandate and leadership.

⁴ Identification of Poor Households.

In total, there were 234 survey participants: 121 from the Civic group and 113 from the non-Civic group. Respondents from the Civic group were selected from the recent ‘Hybrid’ iteration, which took place over 10 months between 2018 and 2019. We randomly selected 96 out of 144 communes from four⁵ out of the seven provinces covered in that iteration. During the survey, we were able to visit 81 of them, and interviewed 121 out of 254 CCs who participated in this iteration of the program. 91 of them (75.2%) joined the previous iterations of the program. Regression analysis of program data demonstrates that joining the previous iteration of the program is not positively associated with greater latrine achievement in the Hybrid iteration (2018–2019) (see Table A1 of Annex). For the non-Civic group, we randomly selected 100 out of 300 eligible communes from three provinces⁶. During the survey, we were also able to interview 113 CCs from 57 communes for the comparison group. As noted earlier, our aim is to assess whether we observe any differences between CCs who participated in Civic Champions and CCs who did not. To this end, the survey fielded questions in seven core areas: (i) participants’ characteristics, (ii) commune’s characteristics, (iii) background and resource assessment, (iv) leadership styles, (v) leadership concept, (vi) self-efficacy, and (vii) promotion strategies.

For questions about leadership styles, we followed [Northouse \(2017\)](#) to analyze and interpret the results. The leadership styles questionnaire is designed to measure three common styles of leadership: authoritarian, democratic, and laissez faire. Respondents were asked a series of 18 questions covering these three main styles of leadership. On a 5-point Likert scale, they express their degree of agreement about statements specifically designed to evaluate adherence to each style. We then aggregated responses within each style for comparison. A score between 6 and 10 denoted a very low agreement of a leadership style, while a score between 20 and 30 denoted a very high agreement. By comparing scores, we can determine which styles are most or least preferred in each study group and between gender. As such, we can assess whether the preferred leadership style of the Civic group is more or less in line with the leadership concepts introduced by the program.

To measure how participants conceptualize leadership, we used the Northouse’s Conceptualizing Leadership Questionnaire (REF). This questionnaire provides information about how each group defines and views leadership. Respondents were asked a series of 24 questions covering 6 main concepts of leadership: ‘Trait’, ‘Ability’, ‘Skill’, ‘Behavior’, ‘Relationship,’ and ‘Process’. On a 5-point Likert scale, they expressed their degree of agreement with statements designed to evaluate adherence to each of these concepts. In this way, the questionnaire can shed light on the aspects of leadership CCs find most or least important, and what is central to their personal understanding of leadership.

Previous studies show that female local leaders need a certain level of education and to possess certain personal characteristics, while facing different challenges, as compared to their male counterparts ([Ly 2016](#); [Huot 2020](#)). As female CCs are under-represented in the population of CCs, the study aims to increase the representation of the female CCs in the survey such that the findings are not intrinsically biased towards male CCs. In order to increase the ratio of females in our survey, where possible, priority was given to selecting female CCs as participants. We reached 35% in the Civic areas and 30% in the non-Civic areas, while in Cambodia, only 17% of the commune council members are female ([NIS 2018](#)).

The survey was incorporated into ODK Collect, an open-source platform for digital data collection. We used a unique identification code for each participant to ensure confidentiality. Before starting each interview, we read and explained to the participants their right to refuse to answer questions, the purpose of the survey, and how the data would be used. The survey team proceeded with the interview only if the participants gave verbal consent. The ethical protocols for this study were approved by the National Ethics Committee for Health Research in Cambodia.

There were two groups of enumerators: one consisting of two WaterSHED research staff who interviewed in the Civic provinces and the other comprising two externally contracted enumerators who interviewed in the non-Civic provinces, supervised by a WaterSHED’s research staff. Participants in both groups were informed that enumerators are from WaterSHED (even if externally contracted). Nevertheless, there is potential for desirability bias in the responses of the Civic group because WaterSHED staff are personally known to participants. To check for this, we compared the consistency of the responses from Civic and non-Civic groups and between enumerators and found no significant inconsistency. To address potential biases that could result from this being an internal

⁵ Takeo, Tboung Khmum, Kampong Cham, Pursat.

⁶ Kandal, Siem Reap, Kampong Thom.

evaluation, we ensured questions focused on participants' leadership capacity and skills, rather than program quality. We trained experienced enumerators on the program, the study purpose, the key concepts, and the questionnaire. Enumerators trialed the questionnaire in groups and conducted tests in the field. The fieldwork, supervised by WaterSHED, took place over a total of 19 days⁷. Responses were backed up daily and checked for consistency of approach across the survey group.

In addition to the primary survey data, we incorporate two further qualitative data sets into our analysis. The first is the participants' 'application form', collected before the program commenced. The application form required participants to elaborate on their existing practices for sanitation promotion in their respective community. We received 245 responses for this question. The responses were coded and then classified thematically to analyze participants' experiences with promotion channels, techniques, target group, key actors, and prior leadership skills.

The second type of qualitative data – competition transcripts – forms the basis of our analysis of local promotion strategies. During each cycle of Discover, Develop, and Deliver conferences, as noted above, CCs who reached their targets were invited to speak to the cohort about the strategies they used to increase latrine uptake. The speech is formally presented and lasts between 5 and 10 min. The structure of the presentation follows a guideline consisting of three main sections: (1) basic information of the presenter and his/her team members who promote sanitation; (2) information about the commune, relevant to the basic sanitation, such as number of households with/without latrines, population, and latrine increase over the three-month competition period; (3) presenters elaborate on how they use their leadership skills to promote the latrine uptake and how teamwork plays a role in helping them to achieve the target. All competition presentations were audio recorded, transcribed, and translated into English. As with the survey, consent forms outlining the purpose of data usage and participants' rights to the information were obtained.

2.2. Data analysis

We followed Nowell *et al.* (2017) to conduct the thematic analysis of the competition transcript data, using ATLAS.TI (Friese *et al.* 2018). In the first phase, researchers familiarized themselves with the data by re-reading the transcripts many times and documenting their reflections in memos in relation to the research questions. In the second phase, we generated initial codes through open coding. In this sense, we employed both inductive and deductive approaches iteratively. For example, three researchers first open coded 6 random transcripts out of 112, which produced a list of 64 codes. We then applied those codes to 10 more random transcripts, reflecting further on the research questions. As a result, the code list was extended to 75 codes. To facilitate the coding, we grouped the codes into main themes in relation to the research questions. Those themes are centered around how, when, and with whom the CCs engaged to promote the sanitation in their commune.

For the survey, since all of our dependent variables of interest are measured on a scale, we used *t*-tests, ANNOVA, and MANOVA to analyze the difference between groups, particularly between the Civic and non-Civic groups and between male and female groups. We test the difference in terms of socioeconomics, learning resources, frequency, and quality of CCs engagement with key sanitation actors, leadership styles, and leadership concepts. For these tests, we assume that our data are normally distributed. We also use multiple regression analysis to understand which factors explain difference in leadership and sanitation promotion capacity among the Civic and non-Civic.

A limitation of our comparative approach is that we lack any baseline study assessing *both* groups prior to this endline survey. If the baseline study were available, an ideal approach would be to use 'Difference in Difference' to measure program impacts and thus provide a clearer avenue for attributing changes among participants to the program. Further, another quasi-experimental approach would be an option if the sampling is random. However, our study sampling is not purely random and involved some level of purposive selection, especially to accommodate the female representation in the sample and the availability of the respondents in the non-Civic group. Finally, we were not able to control for some factors that may affect the leadership experience and capacity of the non-Civic group, as they may be exposed to intervention by other organizations. In the analysis below, we describe the findings in three parts. First, we describe the characteristics and comparability of the communes where surveys took place. Second, we analyse the characteristics of leaders within them,

⁷ The first 3 days took place from the 2nd to the 4th of December 2020, before a Covid-19 outbreak, which forced us to postpone. A month later, after the Covid-19 situation improved, we continued the fieldwork for a further 16 days, from the 11th to the 26th of January 2021.

including their socioeconomic status, position, and skills. We then outline the findings from surveys of their leadership capacities, styles, and concepts. Finally, we address the question of what makes Civic Champions an effective leadership program, by comparing how participants and non-participants work with key local actors, and the different strategies the Civic participants employed for sanitation promotion and uptake before and over the course of the program.

3. RESULTS

3.1. Communes' characteristics

As described earlier, we visited four provinces for the Civic group and three provinces for the non-Civic, comparison group. In the Civic group, participants were interviewed from 81 communes, with an average of 1.5 CCs per commune. In the non-Civic group, interviewees came from 57 communes, with an average 2.0 CCs per commune. This number is similar to the number of CCs participating in the Civic Champions program, which is on average 2.0 CCs per commune.

With a similar number of households per commune and population size (see Table 2), *t*-test results indicate that the average latrine coverage of the Civic commune ($72.0\% \pm 20.2$) is lower than that of the non-Civic commune ($78.9\% \pm 14.8$), a statistically significant difference of 7.9% ($t(df)=130, p=0.011$). The data on latrine coverage were collected approximately 1.5 years after the program. For sanitation challenging factors, we asked CCs to evaluate if their commune had regular issues with flooding. 47% of the respondents said 'yes' in the Civic group, as compared to 64% in the non-Civic group. Similarly, we asked respondents to evaluate if access to clean water is an issue in their commune. 40% of them described it as an issue in the Civic group, while for the non-Civic group, 72% responded 'yes'. Overall, the non-Civic group report experiencing a more challenging sanitation environment, and yet they have greater latrine coverage. One of the reasons could be because the non-Civic communes have many more latrine suppliers on average (9.4), as compared to the Civic communes (4.6). The analysis of the earlier iteration of the Civic Champions Program (2015–2016) shows that the communes that have more latrine suppliers are more likely to be able to achieve more latrine coverage during the program (Bartell *et al.* 2020). In the early stage of WaterSHED's WASH systems strengthening and before the Civic Champions Program was introduced, WaterSHED adopted a light touch approach by acting as a facilitator connecting key system actors, including local suppliers, and users, allowing for high program cost-efficiency (USAID 2018). Further, the increase in sanitation coverage in WaterSHED's target area excludes donated and subsidized latrines, which cannot be controlled in the non-Civic communes. Finally, we asked respondents to estimate the number of NGOs working on sanitation issues in their communes. CCs from the Civic group recalled approximately 2.4 NGOs, as compared to 1.8 NGOs reported by the non-Civic group.

Table 2 | Summary statistics of commune characteristics

Variables ^a	Study Group	N	Mean	Std. Dev.	Std. Error
# of households in the commune	Civic	77	2,175.76	1,215.419	138.510
	Non-Civic	57	2,042.95	955.010	126.494
# of households with latrines	Civic	75	1,678.38	960.169	110.871
	Non-Civic	57	1,638.02	893.615	118.362
# of population in the commune	Civic	74	9,127.20	5,802.019	674.471
	Non-Civic	57	9,861.71	4,402.768	583.161
If flooding is a main issue in the commune	Civic	121	0.47	0.501	0.046
	Non-Civic	113	0.64	0.483	0.045
If limited access to clean water is a main issue in the commune	Civic	121	0.40	0.491	0.045
	Non-Civic	113	0.72	0.453	0.043
# NGOs working in the commune	Civic	121	2.43	1.371	0.125
	Non-Civic	113	1.83	0.789	0.074
# Latrine suppliers in the commune	Civic	121	4.63	6.177	0.562
	Non-Civic	108	9.41	11.329	1.090
Latrine coverage	Civic	75	72.0%	0.2022	0.0233
	Non-Civic	57	78.9%	0.1484	0.0196

^aThe first three variables are secondary data collected based on record at commune hall.

3.2. Leader characteristics

3.2.1. Socioeconomics

In total, we interviewed 121 CCs in the Civic group, 35% of which are females, and 113 CCs in the non-Civic group, 30% of which are females (Table 3). Overall, we observe that Civic CCs are slightly older and more educated than non-Civic CCs. *T*-test results indicate that the average age of Civic CCs (58.07 ± 11.58) is higher than that of the non-Civic CCs (54.33 ± 12.51), a statistically significant difference of 3.77 years ($t(232)=2.379$, $p=0.018$). Further, the average number of schooling years (formal education) of the Civic CCs (8.05 ± 4.04) is slightly higher than that of the non-Civic CCs (6.92 ± 3.07), a statistically significant difference of 0.84 years ($t(230)=2.02$, $p=0.045$). In practice, however, this difference may not be substantial because both groups have an average number of schooling years of approximately seven, which falls into the class of lower secondary education (grade 7–9). For a working experience as a CC, both groups are similar, having around seven years of experience. Overall, despite some slight differences in age and education, in practice, both groups are comparable in terms of their socioeconomic characteristics (see Table 3), especially given their similar levels of work experience as a CC in their commune.

3.2.2. Position and responsibility

In terms of position in the commune council, in the Civic group, 60% of the respondents identified themselves as commune council members, while 30% identified as the 1st and 2nd deputy chief. The rest are commune chiefs, responsible for Child and Woman Affairs, Key Person Commune (KPC), and clerk. In comparison to the non-Civic group, we observe a similar proportion of CCs holding the position of the 1st and 2nd deputy chief. However, for the position of CC members, which is overall the most frequent position reported, we note that group reported a relatively larger proportion of CCs holding this position (see Figure 2). Typically, the commune chief and the 1st and 2nd deputy chief take a more leading role in the commune than the rest of the members. Finally, it is worth noting that the non-Civic group has a greater number of commune chiefs, as compared to the Civic group. As commune chiefs typically hold a more leading role in the council, this greater number of commune chiefs in the non-Civic group helps to ensure that assessing leadership capacity is less biased towards program participants. It is reasonable to assume that the CCs affect leaders' level of confidence and self-efficacy similarly across both groups.

In terms of their specific responsibility within the commune council, the main sectors CCs in the Civic group work in are WASH (36%), Women and Child Affairs (26%) and Social Order (13%). In the non-Civic group, the main sectors are Public Works (24%), Women and Child Affairs (21%) and Social order (13.4%). Notably, we observe that the Civic group engages with and has more experience in the WASH sector than the non-Civic group. The CCs responsible for Women and Child Affairs are predominantly female CCs, as shown in Figure 3.

3.2.3. Learning resources

Overall, *t*-test results show that CCs in the Civic group have a higher level of learning resources available to them, including both formal and informal education. The average number of schooling years of Civic CCs (8.05 ± 4.04) is higher than that of non-Civic CCs (6.92 ± 3.07), a statistically significant difference of 1.1 years ($t(df)=232$, $p=0.017$). Further, the average number of leadership trainings attended by Civic CCs (7.07 ± 7.53) is higher than that of non-Civic CCs (4.22 ± 5.73), a statistically significant difference of 2.8 trainings ($t(df)=232$,

Table 3 | Socioeconomic characteristics of participants

Study group		Count	Minimum	Maximum	Mean	Std. Dev.
Age of respondents	non-Civic	113	28	79	54.33	12.51
	Civic	121	31	77	58.07	11.58
# of schooling years	non-Civic	113	1	16	6.92	3.07
	Civic	121	0	16	8.05	4.039
Gender (1=male, 2=female)	non-Civic	113	0	1	0.30	0.46
	Civic	121	0	1	0.65	0.47
# of years working as a CC	non-Civic	113	1.0	40	7.40	7.12
	Civic	121	2.0	40	8.35	7.07

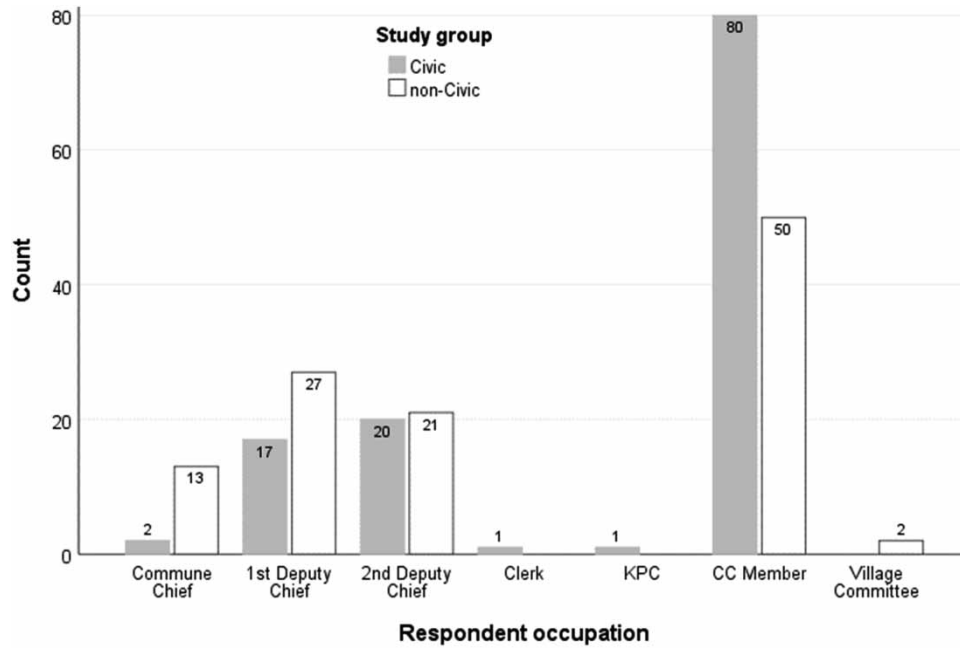


Figure 2 | Participant's position by study groups.

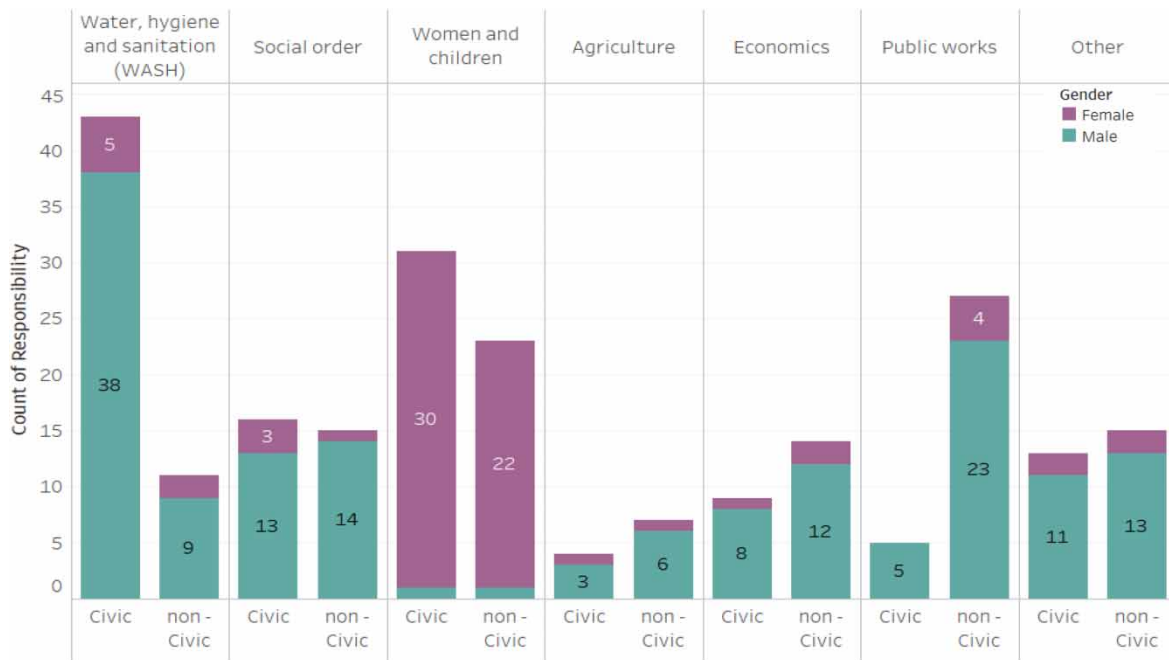


Figure 3 | Participant's responsibility by gender and study groups.

$p=0.001$). Also, the average number of WASH trainings attended of Civic CCs (9.24 ± 8.24) is higher than that of non-Civic CCs (5.11 ± 6.79), a statistically significant difference of 4.1 training ($t(df)=232, p<0.001$). It is worth noting that the Civic Champions Program training is considered as WASH-related training. However, the average number of total trainings attended by both study groups is similar (22.4 in the Civic, as compared to 21.1 in the non-Civic). More significant is the observed difference in training in WASH in the last 5 years (see Table 4).

Table 4 | Summary statistics of learning resources for participants

Variables	Study Group	N	Mean	Std. Dev.	Std. Error
# schooling years (formal education)	Civic	121	8.05	4.039	0.367
	Non-Civic	113	6.92	3.071	0.289
# Trainings in the past 5 years	Civic	121	22.39	19.659	1.787
	Non-Civic	113	21.11	23.733	2.233
# Trainings in WASH in the past 5 years	Civic	121	9.24	8.241	0.749
	Non-Civic	113	5.11	6.792	0.639
# Trainings in leadership in the past 5 years	Civic	121	7.07	7.532	0.685
	Non-Civic	113	4.22	5.733	0.539

3.2.4. Digital literacy for work

Another core skill we tested to identify the characteristics of the leadership groups was digital literacy (see Table 5). Overall, *t*-tests show that the Civic group has lower digital literacy, as defined by the use of internet for work, as compared with the non-Civic group. The non-Civic participants reported using more internet at work (88.5% for the non-Civic, as compared to 80.2% in the Civic) and being more confident with using social media for communicating with people, as well as for organizing data, as compared to the Civic group.

3.3. Leadership capacity, styles, and concepts

3.3.1. Leadership capacity

To understand leaders' capacity, we ran *t*-tests to compare the groups in terms of their self-reported confidence in key leadership and sanitation promotion skills. The key leadership skills included leading a team, effective planning, communicating, and teamwork. The sanitation promotion skills included specific aptitude to lead on topics such as hygiene and latrine promotion. Leaders' confidence in using these skills was measured on a 5-point Likert scale, with 1 being low, and 5 being high. Their overall leadership capacity is then measured as the total confidence scores related to each leadership skill. Likewise, leaders' promotion capacity is measured as the total score of their self-reported promotion skills.

Results indicate that Civic group reports significantly higher scores on leadership and promotion capacity, as compared with the non-Civic group (Figure 4). Overall, the Civic group expressed high confidence in all key leadership skills. This is especially the case for female Civic leaders. They expressed higher confidence than their male counterparts, especially in teamwork. The same is true when it comes to sanitation promotion capacity.

We also ran regression analyses to understand what factors explain the perceived leadership and sanitation promotion capacity within both groups (Table 6). For the Civic group, the key factors indicating higher ratings on *leadership capacity* are (i) gender and (ii) the number of trainings leaders had participated in over the past five years. In particular, females express higher leadership capacity, as compared with male respondents. A correlation analysis shows that there is no correlation between gender and the amount of training ($r=-0.065$, $n=232$, $p=0.323$) In addition, having attended more training in the past is positively correlated with higher leadership

Table 5 | Summary statistics of internet usage for work

Variables	Study group	N	Mean	Std. Dev.	Std. Error
Usage of internet for work	Civic	121	80.2%	0.400	0.036
	Non-Civic	113	88.5%	0.320	0.030
Communicating with people	Civic	121	71.1%	0.455	0.041
	Non-Civic	113	81.4%	0.391	0.037
Searching for information	Civic	121	38.8%	0.489	0.044
	Non-Civic	113	64.6%	0.480	0.045
Organizing my admin work	Civic	121	28.1%	0.451	0.041
	Non-Civic	113	68.1%	0.468	0.044
Organizing your data	Civic	121	28.9%	0.455	0.041
	Non-Civic	113	52.2%	0.502	0.047

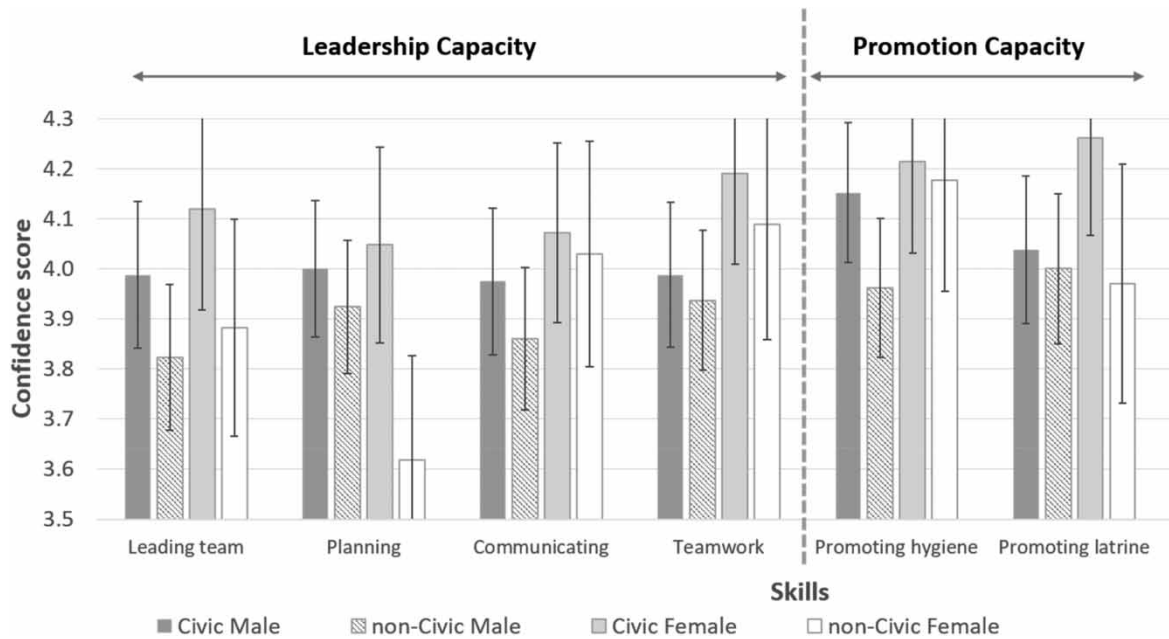


Figure 4 | Leadership and sanitation promotion capacity by gender and study groups.

Table 6 | Regression models explaining different leadership capacity between Civic and non-Civic

Dependent Variables: leadership & promotion capacity	Leadership capacity		Promotion capacity	
	Civic	Non-Civic	Civic	Non-Civic
(Constant)	15.323(1.295)	14.182 (1.312)	8.358 (.777)	6.897 (.931)
Gender (1=male, 0=female)	-.742** (.374)	-.213 (.362)	-.450** (.225)	.007 (.257)
Age	.023 (.018)	.017 (.016)	.015 (.011)	-.001 (.012)
Education (schooling years)	-.005 (.057)	.099 (.060)	-.052 (.034)	.045 (.042)
# of years engaging in the position	-.007(.025)	.022 (.024)	-.011 (.015)	.017 (.017)
If engaging in public services before	-.568 (.427)	-.205 (.342)	-.478* (.257)	-.361 (.242)
If family have business culture	-.261 (.427)	-.264 (.337)	-.025 (.256)	-.583** (.239)
If using internet for work	-.089 (.457)	.212 (.519)	.120 (.274)	.953** (.368)
# Trainings in the past five years	.022**(.007)	.004 (.007)	.011** (.005)	.003 (.005)
Sanitation Challenging Environment	√	√	√	√
Observation	119	113	119	113
R ²	.113	0.063	0.182	.162
Adjusted R ²	.031	-.029	0.106	.08

Standard errors in parentheses.
p*<.10, *p*<.05.

capacity. In contrast, for non-Civic group, we do not find any clear correlational factors that could explain leadership capacity perceptions.

Similarly, for the Civic group, having attended more training in the past has a positive correlation with their sanitation promotion capacity. Further, female CCs expressed higher confidence in sanitation promotion, as compared to their male counterparts. However, we do not observe this difference in the non-Civic group. We also tested for the association between prior engagement in public services and a business culture within the family, and their perceived sanitation promotion capacity. We observe that for the non-Civic group, having a family business culture is negatively correlated with perceived promotion capacity. Surprisingly, for the Civic group, having prior engagement with public services is negatively associated and seemed to explain promotion

capacity. Further, for the non-Civic group having used the internet at work was correlated with a higher promotion capacity. However, we do not have evidence as to whether CCs in both groups used the internet for sanitation promotion.

3.3.2. Leadership styles

Both study groups significantly prefer 'Democratic' over 'Authoritarian' leadership style, while 'Laissez faire' is the least preferred (Table 7). Participants from the Civic group have significantly higher scores on each leadership style, as compared to participants from the non-Civic group. The difference (effect size) is moderate for 'Authoritarian' and 'Laissez faire' styles, and small for the 'Democratic' style.

In a comparison between male and female CCs, in both groups, the males have higher scores for 'Authoritarian' and 'Laissez-faire' leadership than females (Figure 5). However, for the 'Democratic' leadership, female CCs have a higher score than males in the Civic group, but a similar score to the males in the non-Civic group. This suggests that (i) overall, Democratic leadership among local leaders is the most preferred option, especially so for female leaders and (ii) participation in the Civic Champions training is correlated with a reduction in this gender difference in leading styles, particularly in relation to views on Democratic leadership. It is worth noting that the Civic Champions program training curriculum and concepts are in line with the 'Democratic' system measured here.

3.3.3. Leadership concepts

Overall, participants from both groups place the highest emphasis on 'Skills', whereas 'Trait' and 'Ability' received less emphasis (Figure 6). 'Behavior', 'Relationship', and 'Process' are considered more important that

Table 7 | ANOVA result from SPSS for each leadership style

		Sum of squares	df	Mean square	F	Sig.
Authoritarian style score (/30)	Between Groups	174.950	1	174.950	22.061	.000
	Within Groups	1,839.790	232	7.930		
	Total	2,014.739	233			
Democratic style score (/30)	Between Groups	54.707	1	54.707	10.116	.002
	Within Groups	1,254.678	232	5.408		
	Total	1,309.385	233			
Laissez faire score (/30)	Between Groups	162.248	1	162.248	16.194	.000
	Within Groups	2,324.401	232	10.019		
	Total	2,486.650	233			

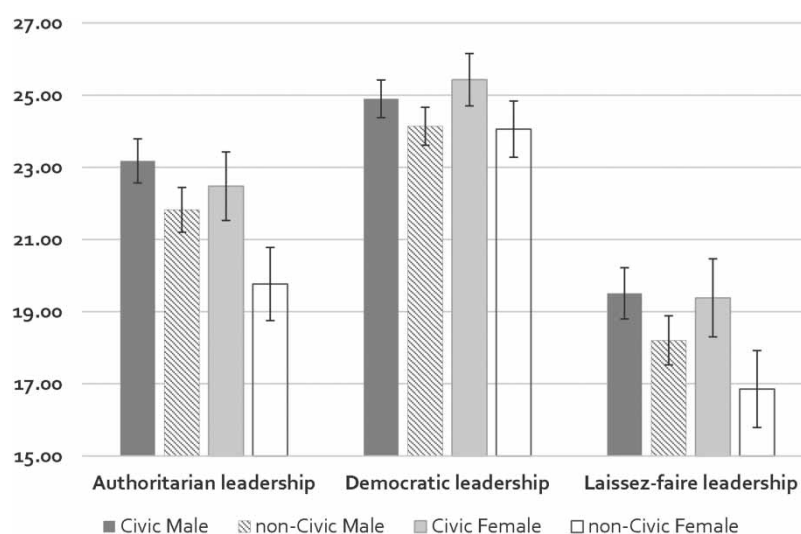


Figure 5 | Leadership styles scores by group and gender.

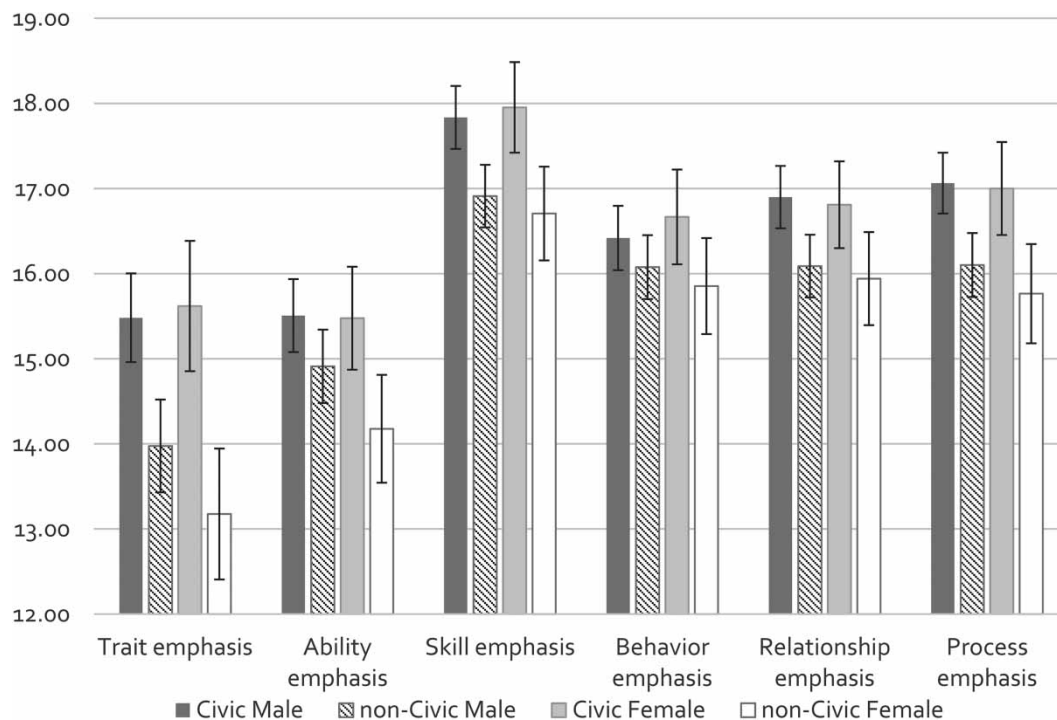


Figure 6 | Leadership concepts scores by group and gender.

‘Trait’ and ‘Ability’, but less important than ‘Skills’. Simply put, for them ‘who leaders are’ is less important than ‘how they act’, and even more so, ‘what knowledge and skills’ they possess. In comparison between groups, the Civic group generally has significantly higher scores in each of the leadership concepts. By gender, in the Civic group, we do not observe any significant difference in emphasis on each leadership concept. However, in the non-Civic cohort, we see a significant difference for the ‘Trait’ and ‘Ability’ emphasis, in which males have significantly higher scores.

3.4. Factors influencing civic champions LEADER effectiveness

3.4.1. The untapped potential of local female leaders

One of the striking dynamics of the Civic Champions Program is the level of engagement by women. Despite governmental efforts⁸, local female leaders remain under-represented at communal level. In Cambodia, only 17% of members in commune councils are female, and there are only 8% female commune chiefs (NIS 2018). In contrast, the Civic Champions Program received significant attention from female CCs. In the program, 33% of the participants are females. Table 8 shows that the most important factors motivating female CCs to join the program were to increase knowledge (48.6%), and to share knowledge (19.4%). Others expressed a desire to expand their network (11.1%), and to assume more responsibilities in their community (11.1%). A small number reported that they wanted to improve their self-confidence, or were asked to join by their managers. Overall, this suggests that although they are under-represented at the commune level, female CCs are motivated to develop leadership skills.

The program not only attracts attention from motivated female CCs, but findings suggest that once they have attended, they outperform their male counterparts on certain measures. As shown in the results above, female CCs rated their leadership and promotion capacity significantly higher than their male counterparts (Figure 3). This result is confirmed in the regression analysis (Table 6), which shows that female CCs express higher confidence in both leading and promoting sanitation. The highest score in their leadership capacity is ‘teamwork’.

⁸ According to Article 19 of the sub-decree on Decentralization of Powers, Roles and Duties to Commune/Sangkat Councils, the commune council shall appoint one woman in charge of the women’s and children’s affairs (Decentralization of Powers, Roles and Duties to Commune/Sangkat Councils 2002).

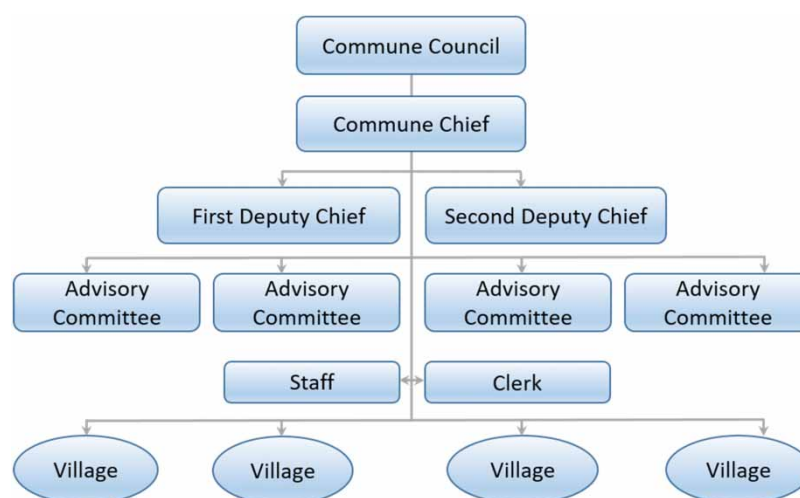
Table 8 | Motivating factors to join the program among female civic participants

	N	Percent
Increase knowledge	35	48.6%
Expand network	8	11.1%
Assume more responsibilities	8	11.1%
Run for reward	2	2.8%
Share knowledge	14	19.4%
Improve self-confidence	3	4.2%
Asked to join by manager	2	2.8%
Total	72	100.0%

Significantly, women's reported self-confidence in promotion and leadership is reflected in measurable achievements against their set goals. As a marker of this, based on data collected during the implementation phase, female CCs received the same number of gold medals (11 medals) as their male counterparts, in spite of them forming a smaller portion of the cohort (33%). These medals are awarded to the Champions during program competition described earlier; CCs who achieve their set target present their strategies to promote sanitation to the rest of their cohort and their presentations are assessed by a panel consisting of representatives from participating communes, WaterSHED, and district/provincial government office, where possible. Overall, the strength of women's engagement and achievements in civic champions is significant in the Cambodia context, where women, regardless of whether they take up a role as a leader, still bear greater responsibility for domestic chores. In addition, to be accepted as a leader, they often need prior work experience in their community to build the necessary local legitimacy to act (Thon *et al.* 2009; Ly 2016).

3.4.2. Strengthening local legitimacy and institutional structure

Another factor contributing to the effectiveness of civic champions is that CCs are encouraged to work through and strengthen the existing institutional arrangements that are in place to meet Cambodia's sanitation goals. At the local level in Cambodia, sanitation is implemented through the commune council management structure (see Figure 7). According to Article 9 of the Law on Commune/Sangkat Administrative Management, a commune council represents citizens (Law on Commune/Sangkat Administrative Management 2001). The council consists of one commune chief, two assistants (1st deputy chief and 2nd deputy chief), and various advisory committees, one of which is responsible for women and children's affairs. Furthermore, the Clerk is appointed within the administrative framework of the Ministry of Interior to ensure financial sustainability. While the commune chief provides overall leadership over the council, the first deputy assists him/her on economic and financial affairs, and the second deputy assists on matters related to administrative and social affairs, public services,

**Figure 7** | Commune Council Management Structure.

and public orders. Finally, the commune chief/commune councils select a village chief, who appoints a deputy chief and a village assistant. The village committee is under the management of the commune council and is tasked to coordinate, seek advice from the council or commune chief, and to act as a link between village residents and the commune council. This highlights the power relations between the commune council and village committee behind sanitation work.

Given the complexity of the institutional arrangements at commune level, how CCs work within and through the networks of actors is significant for shaping their ability to effectively promote sanitation. The local networks utilized in the sanitation promotion work of CCs are shown in Table 9. Overall, the three key actors most frequently engaged by the participants are CC members, village-level officials and NGOs/donors. The main difference between groups is that respondents in the Civic group engaged significantly more with village-level officials and CC members to promote sanitation, while respondents in the non-Civic group engaged frequently more with NGOs/donors. This suggests a significant degree of greater localization in their approach. We also asked respondents to rate the quality of interactions or level of cooperation with these three most important key actors, on a Likert scale with 1 being 'low' and 5 being 'high', as shown in Table 9.

Overall, in both groups, participants are more frequently interacting with commune council members, followed by village officials and NGOs, and their level of cooperation is also higher when engaging with commune council members than with other key actors. In particular, non-Civic participants, especially the females, engage more and have higher levels of cooperation with NGOs/donors. In contrast, the Civic's CCs engage more frequently and have higher level of cooperation with the village-level officials and their commune council members.

For sanitation promotion, only three main key actors were engaged by CCs. The most common key actor is village-level officials, which includes the village chief and deputy village chief. Another key actor is the village focal person, who is a volunteer working in different sectors (in this case sanitation). Finally, NGOs/donors are another key actor mentioned. During the course of the program, however, we observed a much more diverse set of actors involved in their sanitation promotion campaign, as compared to what were done before the program (Table 10). This indicates that participants increased their collaboration/cooperation and/or built a network over the course of the program as a means to promote latrine uptake in their community. The most

Table 9 | Quality of interaction and level of cooperation with key actors among Civic and non-Civic CCs (MANOVA test)

Study group	Frequency of interaction			Level of cooperation		
	NGOs	Village officials	CC members	NGOs	Village officials	CC members
Civic male	2.76	3.91**	4.49**	4.17	4.25**	4.43**
Non-Civic male	2.76	3.40	3.77	4.11	4.05	4.19
Civic female	2.81	4.00**	4.60**	3.96	4.00	4.57**
Non-Civic female	3.14*	3.17	3.66	4.25**	4.17	4.00

* $p < .10$, ** $p < .05$.

Table 10 | Key actors engaged by CCs before and during the program

Key actors	Frequency of coded responses	
	During Program (n=140)	Before Program (n=245)
Village-level officials	165	15
NGOs/donors	80	7
Other government	53	
Village focal persons/volunteers	51	11
Monks/religious figures	29	
Healthcare centers/workers	25	
Schools/teachers	24	
Construction sectors	17	
Finance sector	17	
Other private sectors	15	

important key actor engaged was the village-level official, followed by NGOs, and other government institutions (such as district and provincial levels). Additional actors engaged included healthcare workers, teachers, private construction actors, and professionals in the microfinance sector. While these are actors in formal institutions, we also observed engagement with key actors who are in informal institutions such as village focal persons (volunteers) and monks/religious figures. Village's focal persons normally have a good relationship with the majority of people in the village. Monks or religious figures are highly respected by villagers with the potential to impact village opinion.

We also documented the association between learned leadership skills, and their application to engagement with the key actors. We present here in [Table 11](#) only the skills that were frequently used with the two most common key actors. Village-level officials are the most important key actors with whom CCs exercised their leadership skills, followed by key persons in the village or commune. Those skills include delegating tasks, communicating, developing the subordinate capacity, motivating/inspiring them, and sharing the results.

3.4.3. Adaptive sanitation promotion strategies among civic leaders

3.4.3.1. Existing promotion strategies. Based on qualitative data from the 'application form' filled in before the program started, we categorized the existing promotion strategies by analyzing the association between sanitation promotion channels, promotion techniques, target groups, key actors, and leadership strategies. However, we found that participants' existing strategies are very rudimentary and mainly centered around what channels and techniques they used to promote sanitation, and we did not observe any clear relationships between them ([Table 12](#)).

Overall, direct door-to-door is the most common channel to promote latrine uptake among villagers, followed by village meeting/workshop and informal promotion. Cross promotion, which involves talks in events or ceremonies not focused on sanitation, is the least frequently used approach. For promotion techniques, educating people about the benefits of latrine use is the most popular option, whereas educating people about the consequences of open defecation is also popular. Sometimes, both techniques are mentioned concomitantly in the

Table 11 | Association between leadership skills and key actors engaged

Leadership skills/characteristics	Key actors	
	Key person village/commune	Village-level officials
Communication skills	2	11
Delegating	9	28
Developing	4	10
Motivating/inspiring	2	7
Sharing results with team	3	15

Numbers stand for frequency of coded responses ($n=140$).

Table 12 | Promotion strategies used by CCs before the program started

	Frequency
Promotion channels	
Village meeting/workshop	41
Direct door-to-door	39
Informal promotion	18
Cross promotion	12
Promotion techniques	
Educate about benefits of latrine use	31
Educate about the consequences of open defecation	18
Emotional triggering	8
Household reflection	5

speech, making it difficult to distinguish the two. Other less common promotion techniques include emotional triggering and household reflection.

3.4.3.2. *Locally developed promotion strategies.* Figure 8 presents the relationship between the main themes which define local promotion strategies, namely promotion channels, promotion techniques, target groups, key actors, and leadership skills. The font size reflects the relative frequency/popularity of responses within the main themes, and the line represents the association between each theme.

The ‘code co-occurrence’ tool in ATLAS.TI was used to document the associations between the main themes/concepts in the conceptual framework. Only the associations/relationships that are contextually or theoretically meaningful are reported. Overall, CCs in the Civic group seem to use promotion strategies according to different target groups. While there are more target groups than listed here in Figure 8, we found that only those listed were mentioned in association with other themes. This provides a contextual understanding of how and with whom CCs worked to promote sanitation within each target group. When promoting sanitation at the village level, a range of promotion techniques were used including emotional triggering, giving latrine specification, and educating about the benefits and consequences of having and not having a latrine. Educating, however, was the most frequently reported technique and was especially used during a door-to-door promotion and village workshop. With poor householders, the mostly common technique is educating and was typically done during cross promotion. For non-adopters, the common techniques were household follow-up and sanction such as issuing a formal letter/certificate conditional upon building a latrine.

As a strategy, the CCs align leadership skills with existing practices in their respective communes, such as in whole village meetings where they educate about the benefits of latrine use and consequences of open defecation. While perseverance is seen as an important leadership characteristic in some target groups, namely poor households, non-adopters, and village level, two other skills (communicating and delegating) are key for CCs to work with the key actors engaging in promotional work. Culturally, power distance between leaders and subordinates remains a challenge, even at a local level (Chan & Chheang 2008). The finding is significant because when CCs frequently exercise these leadership skills, it can increase mutual understanding and at the same time open an avenue for lowering the power distance between leaders and their followers, particularly between CCs and village-level officials in this case. Overall, this mapping shows the finely-tuned approach whereby CCs adapt their skills and strategies to different groups. By targeting different groups, using appropriate promotion techniques and channels accordingly, and leveraging leadership skills for each target group, CCs can work more effectively to promote sanitation.

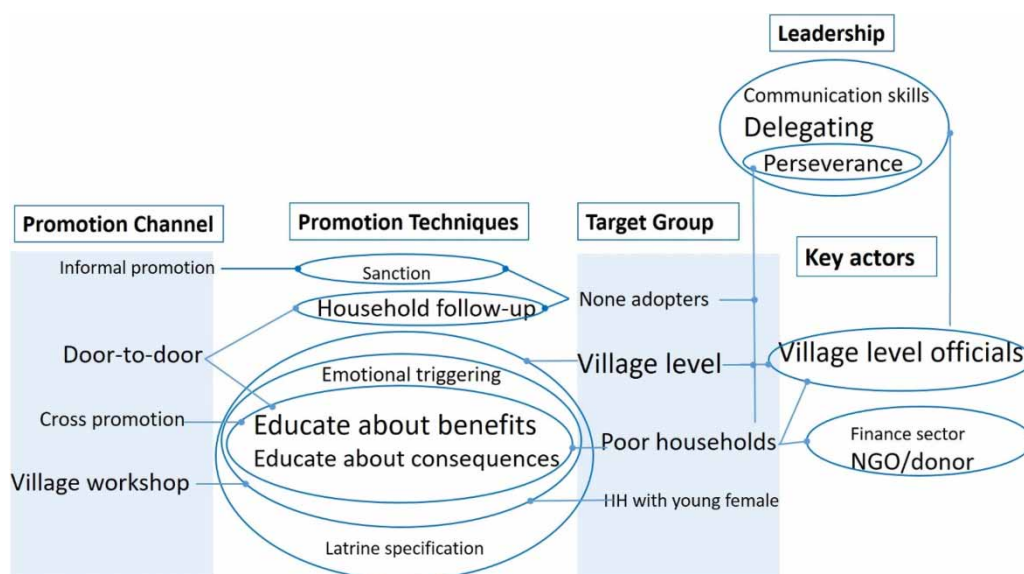


Figure 8 | Description of local promotion strategies developed and used throughout the program.

4. DISCUSSIONS

This study compared leaders who participated in Civic Champions (Civic group), and comparable leaders who did not participate (non-Civic group). These groups are deemed comparable in terms of the scale and nature of the local sanitation challenges faced, and leaders' prior engagement with public services in their locality. The groups differ slightly in terms of occupation (with more commune chiefs in the non-Civic group, more CC members in the Civic group), and their commune responsibilities (with more civic CCs working on WASH, and more non-Civic CCs working on public works). Civic CCs are slightly older and more educated.

Controlling for these differences, from our survey analysis, we identified several other differences between leaders who participated in Civic Champions (the Civic group), and comparable leaders who did not participate (the non-Civic group). These were in terms of their perceived leadership capacity, styles, and concepts. We showed through regression analyses that the number of trainings the participants joined has a positive effect on their leadership and sanitation promotion among the program participants, but not among the non-participant group. An earlier study on the CCs' leadership demonstrates that they lacked the confidence needed for their roles, especially in terms of knowledge and skills (McLennan 2016). This is especially true for Cambodian female leaders (Thon *et al.* 2009). The program addressed this by building self-confidence of local leaders through integrating soft leadership skill training with practices following a clearly defined sanitation goal/target. Not only are 'knowledge and skills' considered important among Civic leaders, but the survey results show that the non-Civic CCs also emphasize that 'knowledge and skills' are key to what it means to be a leader.

Several factors are found to influence the effectiveness of leaders in promoting sanitation: the potential to enhance women's leadership, working through and strengthening pre-existing institutional arrangements, and adapting promotion strategies to different audiences. An unexpected finding, given the challenging context for women's leadership in Cambodia, is that the program highlighted the untapped potential of women as promoters of sanitation uptake, and as leaders with capacity and confidence in general. The finding shows that female leaders who participated in the program expressed significantly higher confidence in leadership and sanitation promotion than their male counterparts. This was not observed in the non-participant group. In terms of women's leadership styles, female Civic participants stand out for scoring higher on 'democratic' leadership. This is conceptually aligned with the ethos of the program, suggesting that this effect may be attributable to participation. Women's leadership potential is also evidenced through their actual achievement – specifically, female CCs received an equal number of gold medals awarded to the Champions, even though they account for only 30% of program participants. Other evidence in Cambodia also suggests that improved confidence and leadership skills among female leaders can increase inclusive outcomes in WASH systems strengthening effort (Huggett *et al.* 2022).

Another key finding is that the Civic Champions program encourages local leaders to operate in ways that strengthen the local institutions mandated to achieve the country's sanitation goals. We found evidence that civic program participants work more collaboratively and more frequently with key local actors within the system, as compared with non-participants. Specifically, civic participants developed closer engagement with commune council members, volunteers, and village committees, rather than with external aid agencies such as NGOs/donors. In this sense, the program actively encourages localization – reflecting and reinforcing growing recognition that change is more sustainable if it is locally-led and aligns with ideas about what is right and wrong for society (Leftwich & Hogg 2008). Further, in a fragmented and weak institution, leaders can potentially create a coherent vision at both national and local levels (De Montalvo & Alaerts 2013).

Finally, we also observe that participants' newly learned leadership skills such as communicating, planning, delegating, and teamwork, are especially significant for working in locally legitimate ways, through commune council and village committee structures. This is notable, since it is a new trend compared to conventional ways of working whereby CCs simply give orders and assignments to village officials – potentially disrupting the dominant power distance model. At the same time, by reinforcing the existing institutional structure at the communal level and building the capacity of local actors, the program has the potential to bring about unintended positive effects for other sectors beyond sanitation. This is because CCs have roles and responsibilities in other development priorities of the country. These effects would not be possible under a market-based approach that depends on sales agents instead of elected CCs. Local leaders can potentially drive needed changes in their communities by aligning purpose, efforts and resources towards a shared goal, and mobilizing local communities (De Montalvo & Alaerts 2013).

5. CONCLUSION

This paper explores the case of an innovative leadership development program – Civic Champions – to investigate the dynamics and effects of local leadership development in WASH programming. Through surveys and qualitative analysis of participants' self-reported perceptions of leadership, it helps to shed light on what motivates individual leaders to engage in WASH activities, and how they navigate and work effectively within the complex institutional system at commune level. It also identifies several factors that enable effective leadership for water and sanitation promotion at the local level in the Cambodian context.

The inner workings of leadership for WASH remain relatively under-explored. This study presents evidence that civic participants are adept at evolving and adapting their promotion strategies to appeal to different actors and to the sanitation challenges being faced. The results showed that participants not only absorbed new leadership skills, but leveraged them in ways that aligned with existing practices and contexts, in order to bring about changes in their community. Agile leaders used different promotion strategies and leadership skills depending on who their target groups were, or who they were working with. Adaptation is especially important in the sanitation context, since different strategies are required depending on whether coverage is moderate or high; the latter being the case for Cambodia now. Having evolving and context-dependent sanitation and leadership strategies thus can increase propensity to succeed in achieving the country's sanitation goal by 2025. This article further suggests, in line with global debates on systems strengthening, that local leadership, working in locally legitimate ways, may be key to unlocking further progress towards these goals (Leftwich & Hogg 2008). This study also draws attention to gender inclusion as strategies towards achieving inclusive WASH outcomes.

Moving donors and program designers away from infrastructure-led projects towards systems-based approaches is a significant policy challenge that many aid agencies are addressing. Though some donors have learned to adapt, as Australia did through precursors to the Water for Women project, it remains a difficult sell to politicians and taxpayers. Systems strengthening and sustainability is a more complex narrative than the often used 'this many dollars pays for this many toilets'. In the UK aid program, for example, there remains some fixation on levels of expenditure rather than the actual purpose of aid. Examples like the Civic Champions program offer pathways in 'exiting from aid' and ending dependency on overseas support. Donors are starting to switch their focus towards supporting effective leadership activities that articulate a consistent values-based message, support local level leadership and innovation, and encourage less rigid projectised approaches. But this will require a longer-term funding commitment.

DATA AVAILABILITY STATEMENT

All relevant data are included in the paper or its Supplementary Information.

CONFLICT OF INTEREST

The authors declare there is no conflict.

REFERENCES

- Agenda for Change 2020 *Strengthening Water Sanitation and Hygiene Systems: Concepts, Examples and Experiences*.
- Bartell, J., Jenkins, M., Vizintin, P. & Salinger, A. 2020 *CIVIC CHAMPIONS 2015–16 SCALE-UP Evaluation*.
- Bejjanki, V. R. 2016 Champions for WASH: understanding the nature of leadership in rural sanitation in India. In *39th WEDC International Conference*.
- Chan, R. & Chheang, V. 2008 Cultural challenges to the decentralization process in Cambodia. *Ritsumeikan Journal of Asia Pacific Studies* 24, 1–16.
- Corbett, J. 2019 *Where Do Leaders Come From? A Leader-Centred Approach*.
- Crocker, J., Abodoo, E., Asamani, D., Domapielle, W., Gyapong, B. & Bartram, J. 2016 *Impact evaluation of training natural leaders during a community-Led total sanitation intervention: a cluster-randomized field trial in Ghana*. *Environmental Science and Technology* 50 (16), 8867–8875. <https://doi.org/10.1021/acs.est.6b01557>.
- Decentralization of Powers, Roles and Duties to Commune/Sangkat Councils 2002.
- De Montalvo, U. W. & Alaerts, G. 2013 *Leadership in knowledge and capacity development in the water sector: a status review*. *Water Policy* 15 (SUPPL.2), 1–14. <https://doi.org/10.2166/wp.2013.109>.
- Dickin, S., Bisung, E. & Savadogo, K. 2017 *Sanitation and the commons: the role of collective action in sanitation use*. *Geoforum* 86, 118–126. <https://doi.org/10.1016/j.geoforum.2017.09.009>.
- Dickson, M. W., Castaño, N., Magomaeva, A. & Den Hartog, D. N. 2012 *Conceptualizing leadership across cultures*. *Journal of World Business* 47 (4), 483–492. <https://doi.org/10.1016/J.JWB.2012.01.002>.

- Dorfman, P., Javidan, M., Hanges, P., Dastmalchian, A. & House, R. 2012 *GLOBE: A twenty year journey into the intriguing world of culture and leadership*. *Journal of World Business* 47 (4), 504–518. <https://doi.org/10.1016/J.JWB.2012.01.004>.
- Foster, T. 2013 Predictors of sustainability for community-managed handpumps in sub-Saharan Africa: evidence from Liberia, Sierra Leone, and Uganda. *Environmental Science and Technology* 47 (21), 12037–12046. <https://doi.org/10.1021/es402086n>.
- Friese, S., Soratto, J. & Pires, D. 2018 *Carrying Out a Computer-Aided Thematic Content Analysis with ATLAS.ti (No. 18; 2)*. <https://doi.org/10.1111/amet.12011>.
- Hartley, J., 2014 Can political leadership be taught? In: *Oxford Handbook of Political Leadership* (Rhodes, R. A. W. & Hart, P. eds). Oxford University Press, Oxford, UK.
- Hollander, D., Ajroud, B., Thomas, E., Peabody, S., Jordan, E., Javernick-Will, A. & Linden, K. 2020 Monitoring methods for systems-strengthening activities toward sustainable water and sanitation services in low-income settings. *Sustainability (Switzerland)* 12 (17). <https://doi.org/10.3390/su12177044>.
- Hudson, D. & McLoughlin, C. 2019 *How is Leadership Understood in Different Contexts?*
- Huggett, C., Da Costa Cruz, L., Goff, F., Pheng, P. & Ton, D. 2022 Beyond inclusion: practical lessons on striving for gender and disability transformational changes in WASH systems in Cambodia and Timor-Leste. *H2Open Journal* 5 (1), 26–42. <https://doi.org/10.2166/h2oj.2022.039>.
- Huot, S. 2020 *Gender and Leadership of Agriculture Cooperatives: The Case of Cambodia*. Available from: https://etda.libraries.psu.edu/files/final_submissions/21340
- Huston, A. & Moriarty, P. 2018 *Building Strong WASH Systems for the SDGs Understanding the WASH System and its Building Blocks*. Available from: <https://www.irwash.org/resources/understanding-wash-system-and-its-building-blocks>
- Hutchings, P., Chan, M. Y., Cuadrado, L., Ezbakhe, F., Mesa, B., Tamekawa, C. & Franceys, R. 2015 A systematic review of success factors in the community management of rural water supplies over the past 30 years. *Water Policy* 17 (5), 963–983. <https://doi.org/10.2166/wp.2015.128>.
- Jenkins, M. W., McLennan, L., Revell, G. & Salinger, A. 2019 *Strengthening the Sanitation Market System: WaterSHED's Hands-Off Experience*, pp. 1–12. Available from: https://watershedasia.org/hands-off-where-taking-a-step-back-is-several-steps-forward/strengthening-the-sanitation-market-system_watersheds-hands-off-experience/
- Law on Commune/Sangkat Administrative Management 2001.
- Leftwich, A. & Hogg, S. 2008 *The Politics of Institutional Indigenization: Leaders, Elites and Coalitions in Building Appropriate and Legitimate Institutions for Sustainable Growth and Social Development. (Background Paper 2)*.
- Ly, T. 2016 *Leadership Pathways for Local Women: Case Studies of Three Communes in Cambodia (No. 108)*.
- McLennan, L. E. 2016 *What Contextual Factors Influence Leadership Amongst Local Government Representatives in Rural Cambodia? Transforming Leadership for Development*.
- McLoughlin, C., Northover, H., Nhim, T. & O'Connor, P. 2021 *Beyond Political Will: Effective Leadership for Water and Sanitation*. DLP Webinar.
- Ministry of Rural Development 2019 *National Action Plan: Rural Water Supply, Sanitation and Hygiene 2019–2023*.
- NIS 2018 *Women and men in Cambodia: Facts and Figures 2018*.
- Northouse, P. G. 2017 *Introduction to Leadership: Concepts and Practice (4th ed.)*. SAGE Publications, Inc, Thousand Oaks, CA.
- Northover, H. 2020 *Implementing Political Will: Effective Leadership in Delivering WASH for all*.
- Nowell, L. S., Norris, J. M., White, D. E. & Moules, N. J. 2017 *Thematic analysis: striving to meet the trustworthiness criteria*. *International Journal of Qualitative Methods* 16 (1), 1–13. <https://doi.org/10.1177/1609406917733847>.
- Schouten, T. & Moriarty, P. 2013 *The Triple-S Theory of Change (Vol. 3)*. Available from: http://www.irwash.org/sites/default/files/2013_wp3_theory_of_change_1.pdf
- Sun, Y., Asante, F. & Birner, R. 2010 *Opportunities and Challenges of Community-Based Rural Drinking Water Supplies: An Analysis of Water and Sanitation Committees in Ghana (No. 01026; IFPRI Discussion Paper, Issue September)*. Available from: <http://ebrary.ifpri.org/utills/getfile/collection/p15738coll2/id/4237/filename/4238.pdf>
- Thon, V., Ou, S., Eng, N. & Ly, T. 2009 *Leadership in Local Politics of Cambodia: A Study of Leaders in Three Communes of Three Provinces*. Cambodia Development Resource Institute, Phnom Penh.
- UNICEF 2019 *Water, Sanitation and Hygiene UNICEF Country Programme 2019–2023*.
- United Nations 2021 *The United Nations World Water Development Report 2021: Valuing Water*. UNESCO, Paris.
- USAID 2018 *Scaling Market Based Sanitation: Desk Review on Market-based Rural Sanitation Development Programs*. Available from: https://pdf.usaid.gov/pdf_docs/PA00T52M.pdf
- USAID 2020 *Creating Viable and Sustainable Sanitation Enterprises. Case Study: Cambodia*. Available from: <https://www.globalwaters.org/sites/default/files/creating-viable-sustainable-enterprises-cambodia.pdf>
- Valcourt, N., Javernick-Will, A., Walters, J. & Linden, K. 2020 System approaches to water, sanitation, and hygiene: a systematic literature review. *International Journal of Environmental Research and Public Health* 17 (3), 702.
- WaterSHED 2014 *Cultivating Civic Champions: Evaluating Leadership Capacity Development among Elected, Local-Level Government Representatives in Rural Cambodia*. Available from: <https://watershedasia.org/wp-content/uploads/2014-11-12-Civic-Champions-Evaluation.pdf>
- WHO 2021 *Cambodia-Joint Monitoring Programme*. Available from: <https://washdata.org/data/household#!/khm>
- World Bank 2017 *Cambodia Sustaining Strong Growth for the Benefit of All a Systematic Country Diagnostic*. World Bank, Washington, DC.

First received 15 September 2021; accepted in revised form 1 August 2022. Available online 11 August 2022