

Key Points

- This policy brief highlights the findings of the “ADBI–Bill and Melinda Gates Foundation Leadership Capacity Development on City-Wide Inclusive Sanitation, Midterm Evaluation Report: 2020–2023.”
- The brief sheds light on the importance of addressing water and sanitation sector challenges, and the achievements of the ADBI–BMGF partnership.
- The recommendations put forth aim to enhance the impact and effectiveness of future initiatives concerning water and sanitation. It is critical to prioritize the improvement of Water, Sanitation, and Hygiene (WASH) services and infrastructure to safeguard health.
- The ADBI–BMGF partnership sought to integrate Citywide Inclusive Sanitation (CWIS) principles into the planning and delivery of sanitation services, contributing to Sustainable Development Goals 6.1, 6.2, and 6.3.
- The 3-year ADBI–BMGF partnership concluded in 2023, with outputs playing a vital role in promoting innovative and sustainable water and sanitation solutions in developing member countries.
- Several recommendations were made to promote the impact of such activities by improving communication with local authorities, utilizing self-paced online learning, and enhancing participation selection criteria.

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ISSN 2411-6734

DOI: <https://doi.org/10.56506/WOPF7234>



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Enhancing the Impact of Capacity Development Programs for Water and Sanitation Services in Asia

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Background

Access to clean water and adequate sanitation is of paramount importance, particularly in the rapidly evolving landscape of the Asia and the Pacific region, where 1.5 billion people in rural areas and 600 million people in urban areas still lack water supply and proper sanitation infrastructure.¹ According to ADB estimates, less than 30% of the population of at least seven developing economies in the region had access to safe drinking water in 2020 (ADB 2022).

As Asia and the world recover from the COVID-19 pandemic, it has become clear that water, sanitation, and hygiene services (WASH) play a vital role in preventing and protecting human health against the spread of viruses and water-borne diseases (ADB n.d.). Moreover, there are significant disparities within the region. For instance, in 2021, in Eastern and South-Eastern Asia, coverage of safely managed drinking water services stood at 99% in Malaysia, whereas it was as low as 18% and 28% in Lao People’s Democratic Republic and Cambodia, respectively (UN 2023).

While sanitation has typically been a challenging goal, the socioeconomic and environmental benefits that improved sanitation provides include a lower disease burden, improvement in nutrition, increased literacy levels and safety for girls and women, reduced stunting, improvement in the quality of life, healthier living environments, better job opportunities and increase in wages, and improved regional competitiveness. Examples from Asian countries such as Cambodia, Indonesia,

The authors extend a special acknowledgment to ADBI Deputy Dean Seungju Baek for chairing ADBI’s knowledge-sharing workshop for the midterm evaluation of ADBI–BMGF partnership products.

¹ ADB. n.d. Water: Knowledge. Manila: ADB. <https://www.adb.org/what-we-do/topics/water/knowledge>.

the Philippines, and Viet Nam show a large potential economic impact of improved sanitation, as a dollar invested in sanitation yields at least a five-fold return in increased productivity (Kelkar and Seetha Ram 2019). As the Asian region faces accelerated urbanization with higher population density, it is projected that by 2030, 55% of the population will be living in urban areas, posing significant challenges for human waste management. As a response, an evolving concept of Citywide Inclusive Sanitation (CWIS) aims to provide everyone in urban areas with access to adequate and sustainable sanitation services (ADB 2021).

Conversations with government officials who have participated in ADBI's capacity-building activities reveal the water and sanitation needs of developing member countries (DMCs). For instance, in Bangladesh, fast-growing cities need to accommodate almost half the population of the country, and 55% of the urban population lives in densely populated areas. The challenges are exacerbated by climate change impacts, such as rising sea levels, which lead to saline water intrusion and water scarcity conditions in coastal areas. Contamination of groundwater with elements such as arsenic and heavy metals make the situation complex, and inadequate waste treatment pollutes surface water.

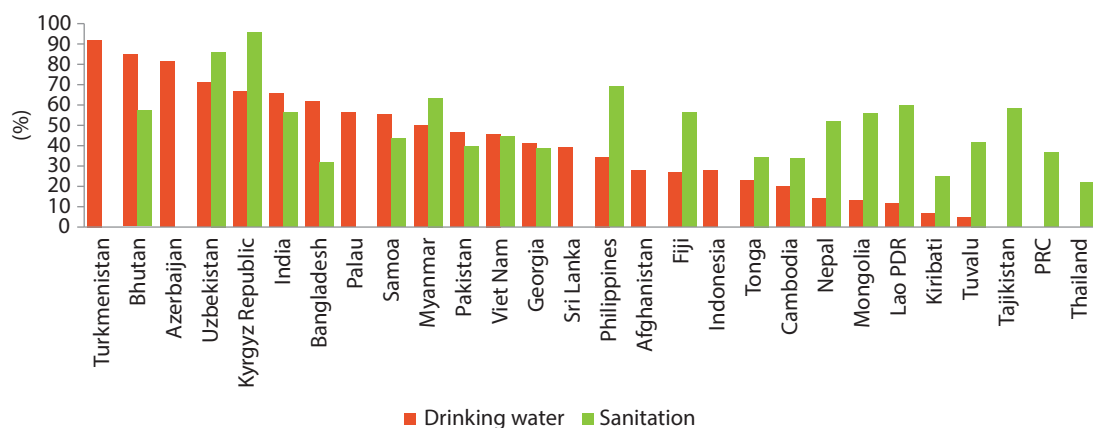
Indonesia's journey to better sanitation infrastructure faces its own set of challenges. In its decentralized

system, getting local governments to commit funds for water and sanitation infrastructure, and devising a consistent financing system is not an easy task. The country's heterogeneity makes the replication of successful projects even more challenging due to the unique needs of each community, and the different operation structures of local governments.

Nepal's story provides more insights, where proposing new solutions, such as WASH Management Information System holds the promise to redefine the sanitation sector. To make technology implementation feasible, capacity building and knowledge sharing play a vital role (ADBI 2023).

Water and sanitation are core targets of the UN Sustainable Development Goals (SDGs), as highlighted in the UN 2030 Agenda. SDG 6, which focuses on clean water and sanitation, sets targets for creating an enabling environment for sustainable management of water resources. According to UN estimates, Asia and the Pacific has the lowest per capita water resource availability, accounting for only 36% of the world's water resources, while over 80% of the wastewater generated in the region's developing countries remains untreated.² These factors make the achievement of SDG 6 even more challenging for the region. Figure 1 shows patterns on access to safe drinking water and sanitation services in developing countries of Asia.

Figure 1: Proportion of Rural Population with Access to Safe Drinking Water and Sanitation Services



LAO PDR = Lao People's Democratic Republic, PRC = People's Republic of China.

Source: Reprinted from ADB estimates using data from the report "Key Indicators for Asia and the Pacific 2023."

² SDG Asia Pacific Knowledge Management Hub. n.d. <https://knowledge.unasiapacific.org/sdgs/sdg6-clean-water-and-sanitation>.

ADBI and the Bill & Melinda Gates Foundation (BMGF) have joined forces to tackle a critical SDG goal. Impact evaluation analysis of the partnership activities provides evidence-based results to support the implementation of knowledge generated from the initiative and understand demand patterns.

ADBI–BMGF Knowledge Products Evaluation (2020–2023)

Initially launched in 2017, the ADBI–BMGF partnership has supported regional sanitation breakthroughs by facilitating data and information-sharing, policy dialogues, and exchange of best practices via training and case studies on the spillover effects of CWIS and arrangements regarding institutional sanitation practices. The renewed partnership in 2020–2023 involved collaborative training initiatives and the distribution of knowledge products to increase access to safe and inclusive sanitation services, as envisioned by the Sustainable Development Goals (SDGs). This partnership comprised several planned programs in collaboration with partner institutions, such as Administrative Staff College India (ASCI), Center for Science and Environment, IHE Delft Institute for Water Education, Japan International Cooperation Agency, Japan Sanitation Consortium, Toyo University, UN-Habitat, UN University, as well as sanitation firms including Daiki, LIXIL, and Toto (ADBI 2023).

During the 3-year partnership, over 200 participants were invited to join a series of capacity-building activities, and contribute to publications, roundtable discussions, and related activities. The key outputs were: four flagship capacity programs (some repeated annually),

a development partner roundtable and policy dialogue, eight case study articles, three policy notes, and finally, blogposts and multimedia outputs—five articles, three videos, and two podcasts. Table 1 summarizes major activities and outputs during the 2020–2023 partnership.

ADBI’s evaluation team conducted a comprehensive assessment of the ADBI–BMGF initiatives’ impact, and integration of its Knowledge Products (KPs) into decision-making regarding water and sanitation. The analysis combining both summary statistics and a qualitative assessment enabled a more holistic interpretation of the outcomes, in line with the “Theory of Change” indicators. Introduced in 2012, ADBI results framework explains “Theory of Change” with respect to knowledge products and capacity building.³ The evaluation team reached out to over 150 participants and collected 72 valid responses. Figure 2 showcases research procedure. Among surveyed, most of the respondents were government officials, with about 10–20 years of professional experience, which is consistent with ADBI’s goal to deliver capacity-building and training (CBT) programs to mid- and senior-level participants. At a later stage, in-depth interviews were conducted to complement and enhance the quantitative assessment from the survey. Statistical analysis was narrowed down by incorporating select country cases on water and sanitation, such as from Nepal, Bangladesh, Indonesia, and India.

While the evaluation yields valuable insights, it is important to acknowledge its limitations and highlight areas for future research. Due to time constraints and availability of respondents, collecting information by an online platform was chosen. The results do not represent all DMCs in general, and future studies should consider a more localized, country-level assessment. Securing

Table 1: Major Activities Under the ADBI–BMGF Partnership, 2020–2023

Activity type	Outputs
Capacity Development Programs	<ul style="list-style-type: none"> ADBI–The Swiss Federal Institute of Aquatic Science and Technology (EAWAG) Online Courses on CWIS ADBI–ASCI training on CWIS (5 cohorts) ADBI–JICA Online Training Program on Wastewater Management and CWIS (2 cohorts) ADBI–Toyo University Program on CWIS (3 cohorts)
Roundtable Discussion and Policy Dialogue	Development Partners Roundtable and the Country Policy Dialogue
Publications and Multimedia	Case studies (India, Malaysia, Nepal, Japan, and People’s Republic of China): 8 articles, working papers, policy briefs, and a policy note, 3 articles, 5 blogpost articles, 3 videos, and 2 podcasts

Source: ADBI.

³ ADBI (2012). ADBI results framework: <https://www.adb.org/sites/default/files/institutional-document/159268/adb-results-framework.pdf>.

Figure 2: Research Design



Source: Prepared by the authors.

documentation to justify whether learnings from knowledge products and capacity-building activities have translated into real actions has been a challenge. In the future, it is important to arrange site visits as part of the evaluation to develop a more comprehensive assessment. Finally, further statistical analysis can be conducted to determine the key factors that impact the effectiveness of the capacity-building activities and knowledge product (KPs).

partnership. “Theory of Change” helps to identify the solutions to tackle the root cause of challenges that hinder the development of inclusive and safely managed water and sanitation practices in Asia. To assess the effectiveness of the partnership outcomes, the following key steps/questions guided the evaluation process:

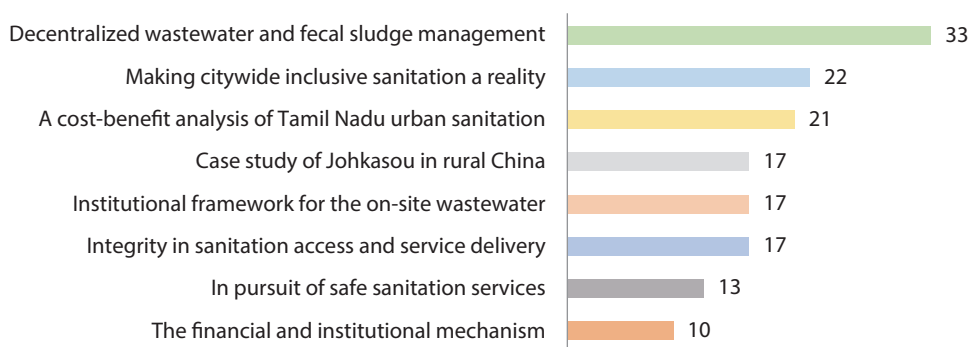
Step 1. Receive: This step helps identify whether knowledge products have been well-received. The results offer valuable insights on the pressing issues DMCs are facing, and their needs regarding knowledge products and learning methods. Figure 3 shows a pattern

Framework to Assess Effectiveness of Capacity Building Programs and Knowledge Products

The evaluation of the partnership activities aimed to assess the effectiveness of the set of given interventions. The set of interventions is defined as a range of activities including knowledge products and training program initiatives, which serve as a core activity of the ADBI-BMGF

“... after joining the ADBI-ASCI session, we understood how much the local government will require to achieve SDGs. 6.1 and 6.2 in terms of investments. The Nationally Determined Contribution was also identified as part of the financing aspect, so that means we will be able to mitigate the financing gap through climate financing as well” (Nepal’s officials, DWSSM’s Senior Divisional Engineer).

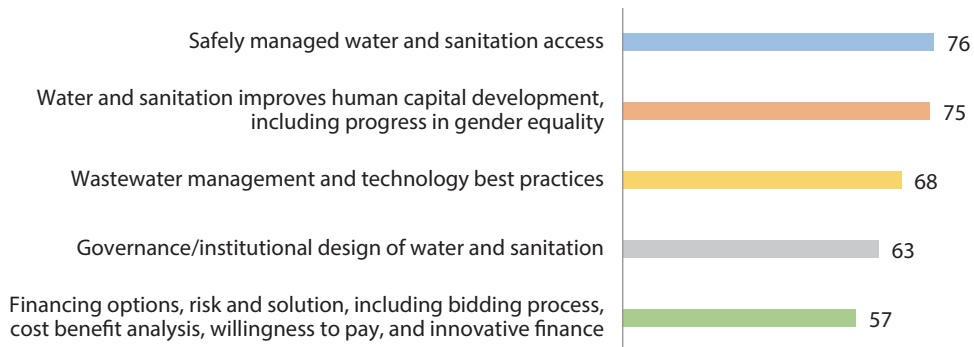
Figure 3: Demand for ADBI Publications (%)
(Percentage of respondents who had downloaded ADBI publications; n = 72)



PRC = People’s Republic of China.

Source: ADBI. 2023. Midterm Evaluation Report: ADBI-Bill and Melinda Gates Foundation Leadership Capacity Development on City-Wide Inclusive Sanitation. Internal document.

Figure 4: What Can Be Learned from ADBI–BMGF KPs? (%)
(Percentage of respondents for each topic; n = 72)



Source: ADBI. 2023. Midterm Evaluation Report: ADBI–Bill and Melinda Gates Foundation Leadership Capacity Development on City-Wide Inclusive Sanitation. Internal document.

of the most downloaded publications, based on the responses of survey participants who are familiar with ADBI publications.

Step 2. Awareness: This step further examines the level of understanding of the knowledge gained from KPs and received during the training. It also delves into the relevance of key topics employed by the program. Figure 4 summarizes the topics on which respondents gained a better understanding. As we can see, respondents got better understanding on safely managed sanitation, CWIS, and the importance of water and sanitation for improving quality of life, gender equality and achieving SDGs Goals. The respondent was also aware of the financing option for implementing CWIS as part of learning outcomes.

Step 3. Commitment: This step covers the various approaches and changes experienced in terms of communication and awareness-raising strategies, planning processes, suitable technology selection, stakeholder and partner identification, project management and evaluation, budgeting, and resource allocation. The results show that the partnership activities were found to be helpful in better planning of water and sanitation projects, technology selection, and stakeholder identification.

“...on the planning process, we implement knowledge from ADBI–BMGF KPs, the relationship between population density and type of sanitation service as well as needs of institutional setup and regulatory mechanism...”
(Nepal’s SGO, Department of Water Supply and Sewerage Management).

Step 4. Implementation: This step dives into the outcome or preliminary impact of the activities. As a result of capacity-building activities and knowledge products produced, DMCs are expected to mainstream ADBI–BMGF’s five topics into their budgeting or planning documentation. Figure 5 showcases which topics are under consideration in the budget adjustment.

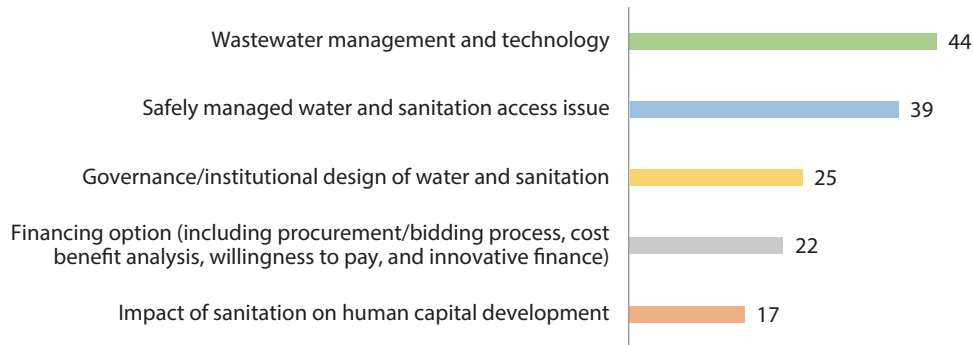
The feedback from program participants showcases their eagerness to implement the learnings into practice. Table 2 presents a summary of the key takeaways.

Advancing Knowledge: A Holistic Approach

Capacity building extends beyond the advancement of skills. Capacity development is a set of multi-layered processes and is multi-dimensional, as it promotes change at interpersonal, individual, institutional, and organizational levels (Punton 2016). In the current environment, when formal education and standard training settings are challenged by uncertainties and complexities, multiple forms of learning with diverse contexts, enriched by case studies and interaction are necessary (Morrison 2001).

The distinguishing feature of the partnership between ADBI and BMGF has been a multifaceted approach for delivering a diverse set of knowledge products and capacity-building activities, which complement each other. While training programs enhance the skills and expertise of government officials and practitioners, knowledge products add depth to capacity building. Ranging from research reports to policy briefs and

Figure 5: Which Topic Is Subject to Adjustment by Incorporating KPs into Budgeting? (%)
(Percentage of respondents for each topic; n = 72)



Source: ADBI. 2023. Midterm Evaluation Report: ADBI–Bill and Melinda Gates Foundation Leadership Capacity Development on City-Wide Inclusive Sanitation. Internal document.

Table 2: Key Findings of the Evaluation Report

The knowledge programs and capacity-building initiatives have demonstrated effectiveness and responsiveness to tackle the issue of water and sanitation access in Asia.
The programs have resulted in increased awareness of the importance of safely managed water and sanitation and their role in improving human resource development and achieving SDGs.
Communication and awareness-raising strategies through capacity-building programs are critical for fostering favorable behavioral changes and promoting water and sanitation projects in DMCs.
Commitment from DMCs on CWIS/safely managed sanitation should be streamlined in the medium- and long-term development plans.
The planning and budget document has been adjusted to focus on wastewater technology and the CWIS concept. Areas for further improvement include guidance on standardization of data and financing schemes, as well as the institutional setup.

Source: Prepared by the authors.

Table 3: Relevance, Efficiency, and Efficacy of Implemented Activities

Relevance	Partnership outputs are strategically aligned with current issues, challenges, and progress in water and sanitation in Asia.
Efficiency	They have effectively influenced behavioral changes in the implementation pathway to promote and achieve inclusive water and sanitation in Asia. There is a greater commitment of DMCs to streamline learnings in the medium and long-term development plans.
Efficacy	Significant effort has been made to disseminate knowledge products. With more than 200 participants, a series of activities addressed challenges in water and sanitation in the Asia-Pacific region.

Source: ADBI. 2023. Midterm Evaluation Report: ADBI–Bill and Melinda Gates Foundation Leadership Capacity Development on City-Wide Inclusive Sanitation. Internal document.

case studies on best practices from DMCs, knowledge products serve as valuable resources for future capacity-building programs. The results of the evaluation demonstrate the relevance, efficacy, and efficiency of the joint efforts in enhancing water and sanitation in Asia, as summarized in Table 3.

Acquisition of new knowledge through capacity building activities and training can be challenging at first. Recognizing this, participants can receive continuous support that goes beyond training sessions. Access to the alumni network, peer-to-peer learning, ongoing conversations on the most pressing issues across the

water and sanitation sector showcases the action-oriented approach of the programs. At the same time, the ADBI and BMGF partnership has adopted an agile approach by reassessing priorities and aligning activities with the current development issues. Feedback from past participants has been continuously incorporated into the improvement and upgrade of subsequent capacity building activities. And finally, capacity-building initiatives seek to set an example for other organizations and partners to replicate and adapt ADBI–BMGF partnership products to generate fresh insights and impactful knowledge for the sector.

Recommendations

The findings from the evaluation report offer valuable recommendations for expanding ADBI–BMGF activities in the future. While DMCs are still at a nascent stage of implementing modern approaches, such as the CWIS concept, innovative capacity building and training is crucial. Improvement regarding the participant selection method should be considered in the future to promote the impact of water and sanitation financing-related KPs and capacity-building programs.

Collaboration: It is important to intensify communication with local authorities and partner with local counterparts, such as NGOs, think tanks, and universities to reach local audiences in targeted countries.

Learning delivery method: Using self-paced online learning with local content can improve institutional capacity to reach regional-level audiences for strengthening the institutional capacity of local water and sanitation authorities.

Participant selection: As the results reveal, participants have shown keen interest in the technological aspects, which could be due to the dominance of participants

from engineering and operational backgrounds. Nevertheless, the financing aspect of the sanitation sector remains of significant interest. For the future, it is important to balance participant backgrounds to include people from diverse backdrops.

Conclusion

This policy note highlights Asia’s need for improved water and sanitation services and infrastructure, along with the significant challenges the region is facing. Achieving enhanced access to safe water, sanitation, and hygiene (WASH) in private and public facilities, remains a complex task for Asian countries. The knowledge products and capacity-building activities delivered under the ADBI–BMGF partnership have played an important role in promoting innovative and sustainable water and sanitation solutions in DMCs (ADBI 2023).

The evaluation of ADBI–BMGF capacity-building activities and knowledge products between 2020–2023 has underscored the relevance, efficacy, and efficiency of the joint efforts in enhancing water and sanitation in Asia. A varied approach for delivering a set of innovative knowledge products and capacity-building activities has effectively influenced behavioral changes in the implementation pathway as DMCs are increasingly eager to streamline learnings in their medium- and long-term development plans.

An agile approach with regular feedback and improvement of processes and outcomes is a distinctive characteristic of the ADBI–BMGF partnership. Recommendations from internal evaluations, such as strengthening collaboration with local authorities, optimizing the learning delivery method via self-paced online learning, as well as enhancing participation selection criteria provide valuable guidance for structuring future joint initiatives that have an even greater impact.

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