

The 6th Operations Committee of Asia Wastewater Management Partnership (AWaP)

August 5, 2026

Tokyo Japan

Secretariat of AWaP

Ministry of Land, Infrastructure, Transport and Tourism (MLIT), Japan

Ministry of the Environment (MOE), Japan

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The 6th Operations Committee of the Asia Wastewater Management Partnership (AWaP) Agenda

Date: Wednesday, August 5th, 2026 9:30-13:00(JCT)

Venue: Tokyo Big Sight

Facilitator: Dr. Pierre FLAMAND

TIME (IST)	ACTIVITY
9:30	Opening remarks Mr. Masahiro YASUDA Director, Water Supply and Sewerage International Affairs Office, Water Supply and Sewerage Planning Division, Water and Disaster Management Bureau, Ministry of Land, Infrastructure, Transport and Tourism
9:35	Introduction of participants Mr. Shinya SAIGO Deputy Director for International Affairs Department, Japan Sewage Works Agency (JS)
9:45	Review of AWaP Activities Mr. Hiromasa INOKI Director for International Affairs Department, Japan Sewage Works Agency (JS)
9:55	【Topic①】Consensus formation for AWaP policy approach for mainstreaming wastewater management and finance. Report from partner countries
10:30	Discussion
10:45	【Topic②】Consensus building for centralized and decentralized wastewater treatment systems. Report from partner countries
11:20	Discussion
11:35	Break time
11:50	【Topic③】Review of AWaP partner countries' achievements Report from partner countries

12:25	Discussion
12:40	【Topic④】Future schedule Mr. Yosuke KANEKO Director for Overseas Projects of Water Supply and Sewerage, Water Supply and Sewerage Planning Division, Water and Disaster Management Bureau, Ministry of Land, Infrastructure, Transport and Tourism
12:45	Q&A
12:50	Closing Remarks Mr. Masashi TAKETANI Director, Office for Promotion of Johkasou, Waste Management Division, Environmental Regeneration and Material Cycles Bureau, Ministry of the Environment
12:55	Group Photo
13:00	Closing

List of Participants on The 6th Operation Committiee of AWaP

Bangladesh

Mst. Aktarunnesa	Local Government Division, Ministry of Local Government, Rural Development and Co-operatives	Senior Assistant Secretary
Engr.Salim Md Jane Alam	Chattogram Water Supply and Sewerage Authority	Managing Director

Cambodia

H.E. Chao Sopheak Phibal	General Directorate of Sewerage and Wastewater Management, Ministry of Public Works and Transport	Director General
Thuch Samprathna	General Directorate of Sewerage and Wastewater Management, Ministry of Public Works and Transport	Official of General Affair and Information

Indonesia

Taufik Hidayt, S.T.,M.Eng	Ministry of Public Works	Functional Environment Expert
Ovik Yanuar Setyapeni, S.T.,M.Eng	Ministry of Public Works	Functional Environment Expert
Naoyuki Hasegawa	JICA Expert (Advisor on Sewerage Management in Ministry of Public Works)	

The Philippines

Alexander-Generoso P. Castro	National Sewerage and Septage Management Program Section, Environmental and Social Safeguards Division, Planning Service, Department of Public Works and Highways	Engineer III
Erlynrose Mari S. Nazareno	National Sewerage and Septage Management Program Section, Environmental and Social Safeguards Division, Planning Service, Department of Public Works and Highways	Engineer III, OIC-Section Chief

Thailand

Chanon Wongphotchanee	Local Public Health and Environment Division, Department of Local Administration (DLA)	Director
Phisek Meethong	Local Public Health and Environment Division, Department of Local Administration (DLA)	Policy and Plan Analyst, Professional Level
Nattaphon Ritsaksit	Local Public Health and Environment Division, Department of Local Administration (DLA)	Policy and Plan Analyst
Supida Pongprai	Local Public Health and Environment Division, Department of Local Administration (DLA)	Officer, Natural Resources Section

Vietnam

Nguyen Quang Anh	Administration of Construction Infrastructure (ACI), Ministry of Construction of Vietnam	Official
Nguyen Kim Thang	Administration of Construction Infrastructure (ACI), Ministry of Construction of Vietnam	Deputy Director
Nguyen Huy Trinh	Administration of Construction Infrastructure (ACI), Ministry of Construction of Vietnam	Deputy Head of Transportation Infrastructure Division
Nguyen Manh Cuong	Transport Infrastructure Division, Administration of Construction Infrastructure (ACI), Ministry of Construction of Vietnam	Official
Hoang Thuy Linh	General Affairs, Center for Construction Infrastructure, Administration of Construction Infrastructure (ACI), Ministry of Construction of Vietnam	Official
Tatsuya SHIBATA	JICA Expert (Sewerage Policy Advisor in Ministry of Construction)	
Dao Nguyen	Assistant to JICA Expert (Sewerage Policy Advisor in Ministry of Construction)	

Japan(Secretariat / Supporting Organization)

Masahiro YASUDA	Water Supply and Sewerage Planning Division, Water and Disaster Management Bureau, Ministry of Land, Infrastructure, Transport and Tourism	Director, Water Supply and Sewerage International Affairs Office
Yosuke KANEKO	Water Supply and Sewerage Planning Division, Water and Disaster Management Bureau, Ministry of Land, Infrastructure, Transport and Tourism	Director for Overseas Projects of Water Supply and Sewerage
Masashi YAKU	Water Supply and Sewerage Planning Division, Water and Disaster Management Bureau, Ministry of Land, Infrastructure, Transport and Tourism	Chief Official for Development and Promotion
Masashi TAKETANI	Office for Promotion of Johkasou, Waste Management Division, Environmental Regeneration and Material Cycles Bureau, Ministry of the Environment	Director of Office for Promotion of Johkasou
Aika HISAHARA	Environmental Management Division, Environmental Management Bureau, Ministry of the Environment	Deputy Director

Shuichiro NAKAYAMA	Office for Promotion of Johkasou, Waste Management Division, Environmental Regeneration and Material Cycles Bureau, Ministry of the Environment	Section Chief of Office for Promotion of Johkasou
Minoru FUJITANI	Office for Promotion of Johkasou, Waste Management Division, Environmental Regeneration and Material Cycles Bureau, Ministry of the Environment	Senior Environment Expert
Yukako INAMURA	Institute for Global Environmental Strategies (IGES)	Research Manager
Sui KANAZAWA	Institute for Global Environmental Strategies (IGES)	Researcher
Ezra OSORIO	Institute for Global Environmental Strategies (IGES)	Researcher
Dr. Pierre FLAMAND	International Affairs, the Japan Sanitation Consortium (JSC)	Manager
Hiromasa INOKI	Japan Sewage Works Agency	Director
Shinya SAIGOU	Japan Sewage Works Agency	Deputy Director
Kazuko ABE	Japan Sewage Works Agency	Staff
Kazuhiro Uchida	Japan Sewage Works Agency	Staff
Jun MITSUORI	MRI Research Associates, Inc.	
Yuri ITO	MRI Research Associates, Inc.	
Nao TAKAYAMA	MRI Research Associates, Inc.	
Maiko OTA	MRI Research Associates, Inc.	
Kako OTAKI	MRI Research Associates, Inc.	

Document 1

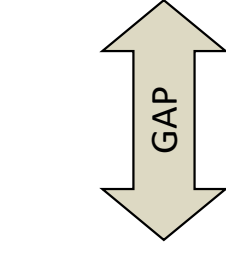
Review of AWaP Activities

The logo for the Sustainable Development Goals (SDGs) is displayed vertically. It features the words "SUSTAINABLE" and "DEVELOPMENT" in blue, stacked vertically. To the right of these words is a large blue "GOALS" where the "O" is replaced by the circular SDG icon, which consists of 17 colored segments representing the different goals.6
CLEAN WATER
AND SANITATION

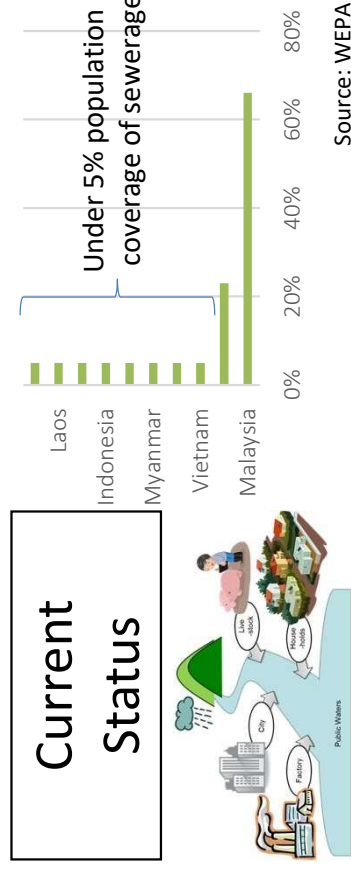
17 inclusive targets by 2030

Target 6.3

“Halving the proportion of untreated wastewater”



Current Status



Gap

Low priority of wastewater management

Lack of knowledge and information

Lack of budget and appropriate technology

Objectives

1 Raising Awareness on Wastewater Management

- 1.1 Spreading the importance of wastewater management and the outcome of AWaP through international conferences
- 1.2 Spreading information to promote the understandings of the effectiveness of wastewater management to citizens and officials in partner countries

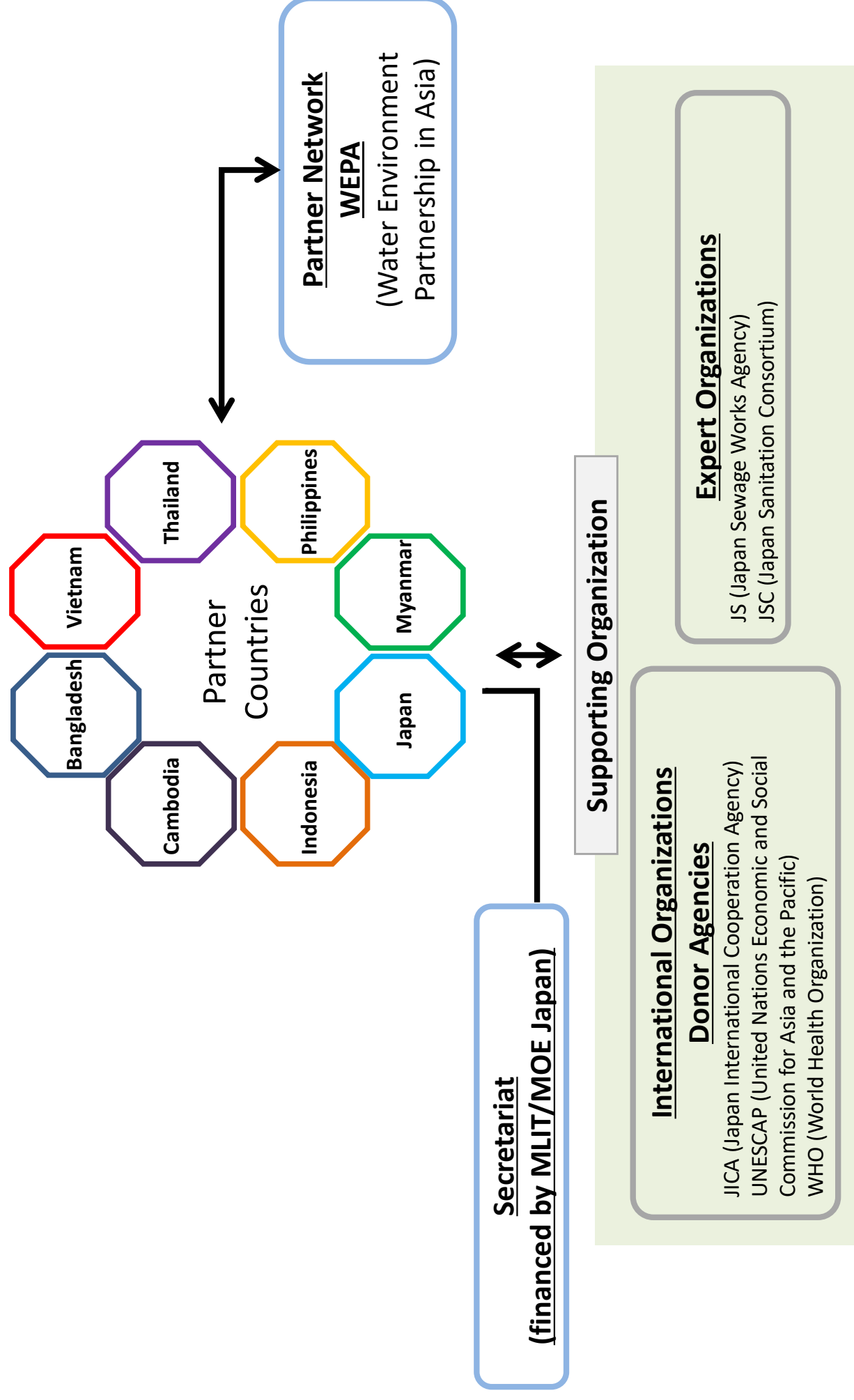
Monitoring of Wastewater Management

- 2.1 Submitting of annual report from partner countries
- 2.2 Publishing AWaP synthesis report

3 Resolving Common Challenges

- 3.1 Mainstreaming wastewater management
- 3.2 Promote Centralized and Decentralized wastewater treatment systems
- 3.3 Trenchless sewer pipe constructing
- 3.4 Sharing and discussing sewerage technologies and case studies adapted to local conditions
- 3.5 Sharing and discussing common challenges

Organizational Structure of AWaP



Implementation Guidelines of AWaP

■ **Partner countries** are the key members of this partnership and the main constituents.

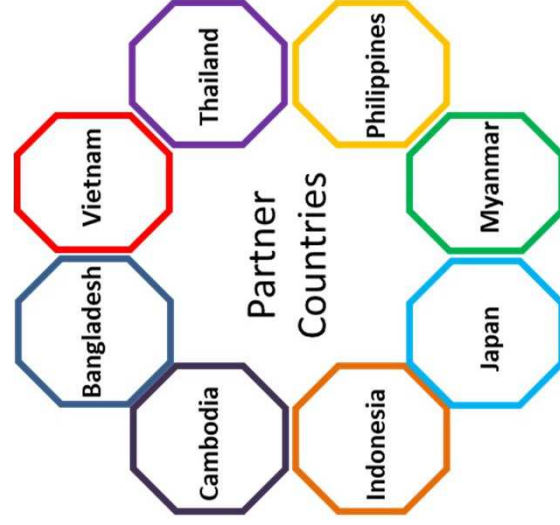
Roles and responsibilities are:

- A) Registering focal points
- B) Regular reporting and sharing of information
- C) Participating in activities
- D) Participating in meetings

■ **Supporting organizations** are to contribute to AWaP's efforts by offering and sharing each organization's resources.

- A) International organizations, development assistance organizations
- B) Public sector entities
- C) Research institutions and universities

Partner countries



Supporting Organization

International Organizations

Donor Agencies

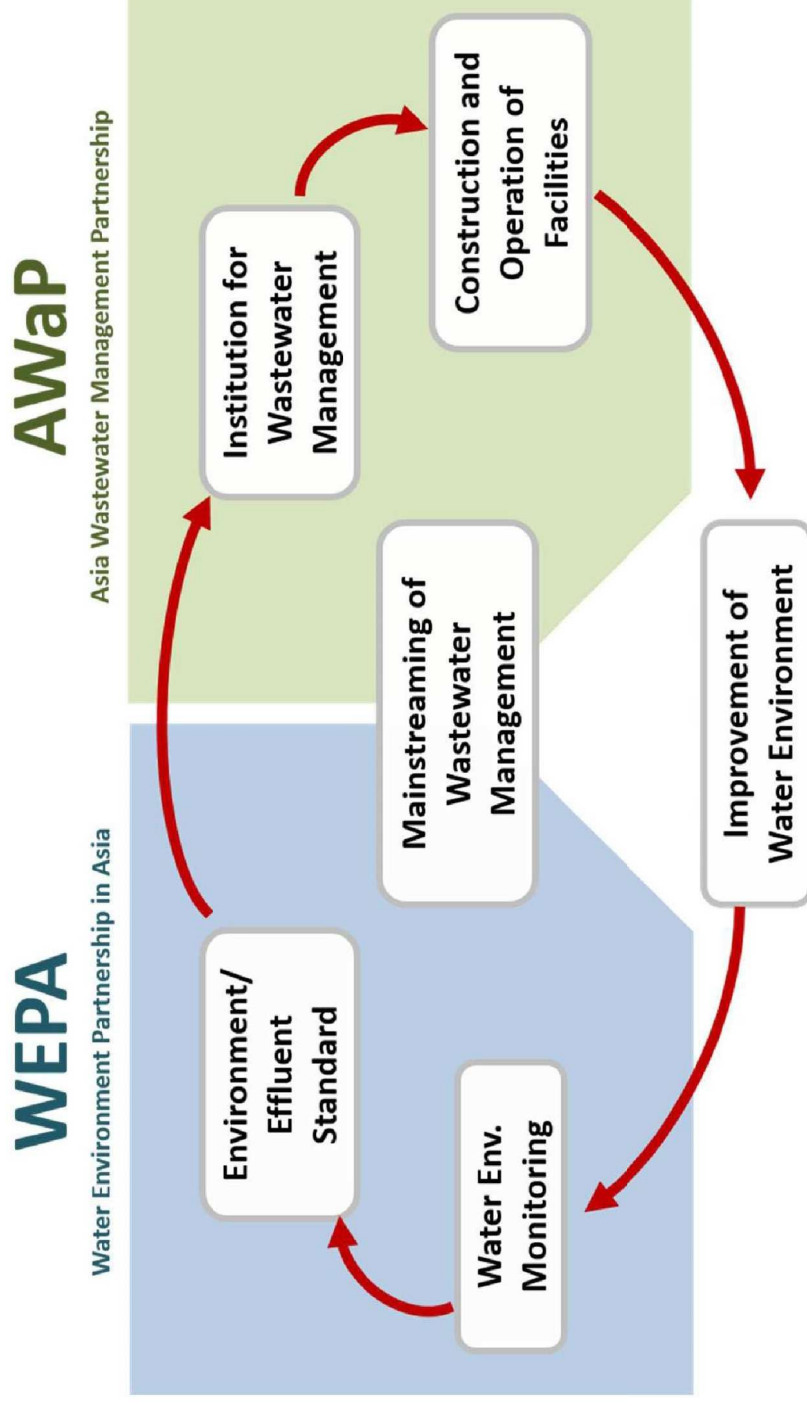
JICA (Japan International Cooperation Agency)
UNESCAP (United Nations Economic and Social Commission for Asia and the Pacific)
WHO (World Health Organization)

Expert Organizations

JS (Japan Sewage Works Agency)
JSC (Japan Sanitation Consortium)

Close cooperation with Water Environment Partnership in Asia (WEPA)

- The Water Environment Partnership in Asia (WEPA) aims to contribute to improving the water environment by offering the information and knowledge necessary for the enhancement of water environment governance.
- For the mainstreaming of “wastewater management”, **AWaP will implement activities through close cooperation with WEPA.**



Past activities of AWaP

The 1st General Meeting (July 25, 2018, Kitakyushu City)

- ◆ The participants agreed to continue the discussion among partner countries and concerned organizations for the implementation of the 1st work plan for five years (until 2023), which consists of three activities.

- ① Raising Awareness on Wastewater Management
- ② Monitoring of Wastewater Management
- ③ Resolving Common Challenges

- ◆ The participants confirmed their intention to actively engage in the activities of AWaP based on the work plan.



group photo

The 2nd General Meeting (August 18, 2021, online)

- ◆ Three solutions to common challenges were agreed upon.

- ① Improving the sewer system by combining centralized and decentralized wastewater treatment systems
- ② Sewer pipe laying using the Trenchless Sewer Pipe Construction Method (trenchless method)
- ③ Development of sewerage technologies adapted to local conditions

- ◆ Partner countries shared their activities and challenges.



group photo

Past activities of AWaP

The 3rd General Meeting (August 1, 2023, Sapporo City)

- ◆ Reviewed the 1st Work Plan activities
- ◆ Compiled the 2nd Work Plan to achieve SDG wastewater-related targets by addressing common wastewater management issues.



Cambodia



Cambodia’s progress report

Mr. Chao S. Phibal



Philippines



Philippines’s progress report

Mr. Michael T. Alpasan



Indonesia



Indonesia’s progress report

Ms. Marsaulina Farida
Masniari Pasaribu



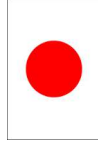
Vietnam



Vietnam’s progress report

Mr. Luong Ngoc Khanh

Scenes of the 3rd General Meeting



Japan

Resolving Common Challenges



Japan’s progress report

Mr. Shu Nishi

Past activities of AWaP

The 5th Operations Committee (September 24, 2024, Tokyo)

- Approved the admission of two new partner countries, Bangladesh and Thailand
- Information sharing and opinion exchange based on the Second Work Plan agreed upon at the 2023 General Meeting.
 - Topic 1: The AWaP policy for optimal wastewater treatment systems
 - Topic 2: Organizing regional issues, especially the finance of sewerage projects
 - Topic 3: Collection of technologies and examples by countries
 - Topic 4: Setting AWaP indicators for wastewater treatment



group photo

Review of the 4th AWaP General Meeting

At the 4th AWaP General Meeting held in November 2025, the AWaP policy approaches regarding “Mainstreaming wastewater management and Finance” and “Optimum wastewater treatment systems” were adopted.

From Chair’s summary

The AWaP policy approach for mainstreaming wastewater management and securing funding was established. Partner countries shared each finance initiative and confirmed that prioritizing wastewater management and ensuring sustainable funding sources align with the AWaP policy approach.

An additional measure in the AWaP policy approach was proposed for optimal wastewater treatment. Specifically, developing plans for the diffusion of centralized and decentralized treatment systems, adopting the Citywide Inclusive Sanitation (CWIS) approach, and implementing them in a phased manner as quickly as possible. Partner countries agreed on the policy approach.



4th AWaP General Meeting Chair's summary

At the 4th AWaP General Meeting held in November 2025, the AWaP policy approaches regarding “Mainstreaming wastewater management and Finance” and “Optimum wastewater treatment systems” were adopted.

From Chair's summary

12. Good examples and initiatives based on the above proposed policy shall be discussed at the next Operations Committee.
13. An update on the progress of the compilation of technical and policy case studies was provided. The case study compilation shall continue to be processed.
14. A draft update of the AWaP activity plan through 2030 has been proposed. Key updates include the following:
 - We have updated the schedule for the international conference we will attend to introduce AWaP activities.
 - Activity durations were revised according to the Work Plan to reflect current conditions.
 - At the 2027 General Meeting, we will summarize AWaP's achievements through its 2030 conclusion.
15. The proposal for the next General Meeting and Operations Committee was presented.
 - The Sixth Operations Committee, scheduled for August to October 2026 in Tokyo, Japan, will make a concrete discussion leading up to the Fifth General Meeting.
 - The Fifth General Meeting is proposed to take place from August to October 2027 in Indonesia.
 - The Secretariat will coordinate with partner countries regarding the timing.

AWaP policy approach for mainstreaming wastewater management and finance

AWaP partner countries confirm that establishing a fiscal system is necessary for the development, operation and maintenance (O&M) and management of wastewater treatment facilities, and share the following policy.

- To promote the development of wastewater treatment facilities and ensure their sustainable O&M and management it is essential that all people and society understand the importance of wastewater management and position it as a national priority policy issue—that is, mainstream wastewater management.
- The administrative department responsible for wastewater treatment and environmental affairs in partner countries should collaborate with local governments to raise public awareness regarding wastewater treatment for all people and society, based on water usage patterns and urban/environmental conditions, and strive to mainstream wastewater management.
- The administrative departments responsible for wastewater treatment and environmental affairs in partner countries should strive to establish systems that secure the necessary financial resources for promoting the development of wastewater treatment facilities and ensuring their sustainable O&M and management through mainstreaming wastewater management. In establishing the system, we will conduct studies in collaboration with local governments, taking into account existing social and fiscal systems, and strive to appropriately combine funding sources (bonds, taxes, user fees).
- The administrative departments responsible for wastewater treatment and environmental affairs in partner countries should share and learn from each other's efforts to mainstream wastewater treatment and establish fiscal systems, thereby fostering better initiatives.

AWaP policy approach for optimum wastewater treatment systems

AWaP partner countries confirm that wastewater treatment facilities include decentralized systems serving one or more households based on population density, topography, and regional connectivity, as well as centralized systems serving community or city-wide areas, and share the following policy.

- An optimal deployment of wastewater treatment facilities, adopting the Citywide Inclusive Sanitation (CWIS) approach, is necessary to ensure all people have access to properly managed wastewater treatment services.
- It is important for administrative departments responsible for wastewater treatment and environmental affairs and local governments in partner countries to take the lead in creating deployment plans for the efficient and effective development of wastewater treatment facilities, including decentralized and centralized treatment systems.
- The deployment plan for wastewater treatment facilities determines the wastewater treatment services citizens receive. When developing this plan, we should fulfill our accountability to citizens by considering not only economic factors but also regional characteristics such as water environment conservation, construction feasibility, and the difficulty of securing land.
- To enable early operation of wastewater treatment services, it is important for administrative departments and local governments responsible for wastewater treatment and environmental affairs in partner countries to take the lead and systematically and progressively develop wastewater treatment facilities while considering the status of related infrastructure, such as water supply systems. Furthermore, they should periodically review deployment plans to reflect changes in social conditions.
- The administrative departments responsible for wastewater treatment and environmental affairs in partner countries should share initiatives related to the optimal deployment of wastewater treatment facilities, learn from each other, and develop better approaches.

The 2nd Work Plan for 2030



Activities	2023	2024	2025	2026	2027	2028	2029	2030
Schedule	General Meeting	Operations committee						

1. Raising Awareness on Wastewater Management

1.1 Spread the importance of wastewater management and the outcome of AWaP through international conferences	WEPA International Workshop	Public relations at WWF 2024	Public relations at UN Water conference 2026	Public relations at WWF 2027				
1.2 Spread information to promote understanding of the effectiveness of wastewater management to citizens and officials in partner countries								

Spread information at conferences hosted by support organizations or international conferences (ex. WEPA)

Public relations at WWF 2027

Public relations at UN Water conference 2026

Public relations at WWF 2024

Implement public awareness activities by each partner country (ex. Expansion of KIZUNA Festival (Cambodia), IECs (Information and Education Campaigns) (Philippines), Training Courses (Vietnam) to other AWaP countrys)

Implement challenges raised in APWS 2022

Implement challenges raised in Next APWS)

2. Monitoring of Wastewater Management

2.1 Submission of annual report from partner countries	Updating annual report	Submission of annual report from partner countries / Follow SDGs target 6.3 achievement						
2.2 Publishing AWaP Synthesis Report	Publishing AWaP synthesis report	Publishing AWaP synthesis report on website (considering collaboration with WEPA)						

The 2nd Work Plan for 2030



Activities	2023	2024	2025	2026	2027	2028	2029	2030
Schedule	General Meeting	Operations committee						

3. Resolving Common Challenges

3.1 Mainstreaming wastewater management	Setting and sharing AWaP policy regarding mainstreaming and financing Organizing regional issues, especially finance of sewerage projects Consensus formation for AWaP policy Follow-up the activities implemented by each partner country							
3.2 Promote Centralized and Decentralized wastewater treatment systems	Setting AWaP policy for optimum wastewater treatment systems Consensus building for centralized and decentralized wastewater treatment systems Survey and share early solutions (Quick Project) for wastewater system improvement in undeveloped areas Follow-up of the activities implemented by each partner country							
3.3 Trenchless sewer pipe constructing	Continuous development of national technical standards for the pipe-jacking method by involved countries Formulating the draft guidelines in the Philippines HRD through technical seminars or on-site training							
3.4 Sharing and discussing sewerage technologies and case studies adapted to local conditions	Collection of technologies and case studies by countries Discussion on challenges beyond the SDGs6.3							
3.5 Sharing and discussing common challenges	(Discussing issues as they arise)							

Document 2

Discussion topics for the 6th Operation Committee

Topics for Discussion at the 6th Operation Committee

We will discuss the following topics based on the second work plan.

Topic1

Consensus formation for AWaP policy approach for mainstreaming wastewater management and finance

Topic2

Consensus building for optimum wastewater treatment systems

Topic3

Review of AWaP partner countries' achievements

Topic4

Future Schedule

Topic 1

Consensus formation for AWaP policy approach for mainstreaming wastewater management and finance

From Chair's Summary

10. The AWaP policy approach for mainstreaming wastewater management and securing funding was established. Partner countries shared each finance initiative and confirmed that prioritizing wastewater management and ensuring sustainable funding sources align with the AWaP policy approach.

12. Good examples and initiatives based on the above proposed policy shall be discussed at the next Operations Committee.



In Topic 1, AWaP partner countries will report on their activities related to the three key elements of the AWaP policy approach for mainstreaming wastewater management and finance, followed by discussions.

AWaP policy approach for Mainstreaming Wastewater Management and Finance

AWaP partner countries confirm that establishing a fiscal system is necessary for the development, operation and maintenance (O&M) and management of wastewater treatment facilities, and share the following policy.

- To promote the development of wastewater treatment facilities and ensure their sustainable O&M and management it is essential that all people and society understand the importance of wastewater management and **position it as a national priority policy issue—that is, mainstream wastewater management.** ①
- The administrative department responsible for wastewater treatment and environmental affairs in partner countries should **collaborate with local governments** to raise public awareness regarding wastewater treatment for all people and society, based on water usage patterns and urban/environmental conditions, and strive to mainstream wastewater management. ②
- The administrative departments responsible for wastewater treatment and environmental affairs in partner countries should strive to establish systems that secure the necessary financial resources for promoting the development of wastewater treatment facilities and ensuring their sustainable O&M and management through mainstreaming wastewater management. In establishing the system, we will conduct studies in collaboration with local governments, taking into account existing social and fiscal systems, and **strive to appropriately combine funding sources (bonds, taxes, user fees).** ③
- The administrative departments responsible for wastewater treatment and environmental affairs in partner countries should share and learn from each other's efforts to mainstream wastewater treatment and establish fiscal systems, thereby fostering better initiatives.



Country: Bangladesh

Consensus Formation for Mainstreaming Wastewater Management and Finance

Wastewater management policy

Actions Taken

- ✓ Bangladesh participated in the 4th AWaP General Meeting through representatives from LGRD and Chattogram WASA, sharing national experiences on wastewater management and supporting the AWaP policy approach of mainstreaming wastewater management and finance toward achieving SDG Target 6.3.
- ✓ Wastewater management continues to be integrated into national development through:
 - Bangladesh Delta Plan 2100
 - National Water Policy
 - Urban sanitation and environmental protection programs
 - Ongoing sewerage development projects in Dhaka, Chattogram and Khulna.

Progress

- Increased recognition of wastewater management as a national environmental and urban development priority.
- Continued policy dialogue through AWaP.





Participation of Bangladesh in the 4th AWaP General Meeting





Country: Bangladesh

Consensus Formation for Mainstreaming Wastewater Management and Finance Collaboration with local governments

- LGD continued coordination with **Dhaka WASA, Chattogram WASA, DPHE, City Corporations and Municipalities** for sanitation improvement and wastewater services and provide supports and necessary guidance.
- LGD, JICA and Swiss Agency for Development and Cooperation (SDC) organized the **Urban Governance and Economic Development Workshop (27 Nov 2025)** to strengthen municipal governance and urban service delivery.
- Capacity building for municipalities on sanitation, Citywide Inclusive Sanitation (CWIS) and infrastructure planning continued through development partner programmes.



Dasherbandi Sewage Treatment Plant, Dhaka



Chattogram Metropolitan Sewerage Project (1st Phase)





Topic 1: Consensus Formation for Mainstreaming Wastewater Management and Finance

1. Prioritizing Wastewater Management in Cambodia

- *Cambodia is strengthening its legal framework, technical standards, and institutional capacity to support sustainable urban development under the Sewerage Law.*



Policy & Institutional Progress

- Implementing the **Law on Sewerage (2024)** with regulations and standards
- Advancing the **National Sewerage Master Plan** and city-level planning
- Integrating wastewater into urban infrastructure and public health policy



Regulatory Development

- Sub-Decree and Prakas as required in Sewerage Law
- Guidelines for Off-Site Treatment System
- Technical Standards
- Faecal Sludge and Septage Management Policy (2025–2035)



Capacity Building & Digital Transformation

- Strengthening MPWT and sub-national authority capacity
- Promoting **GIS and Asset Management**
- Developing O&M guidelines for wastewater treatment plants



Pentagon Strategy

Promoting clean, green, and sustainable development, including sewage management.
2023-2028



Circular Strategy on Environment

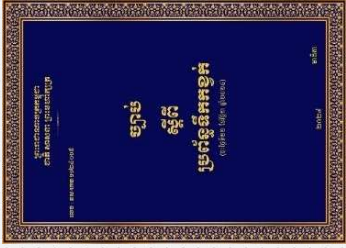
Build a cleaner, greener, and more sustainable Cambodia and a carbon-neutral economy by 2050.
2023-2028



Cambodia SDGs

6.2. Achieve access to adequate sanitation and hygiene for all;
6.3: Improve water quality by halving the proportion of untreated wastewater
2030

Country: Cambodia



This law consisting of **16 chapters, 113 articles, regulates the management, development, construction, repair, maintenance, operation and use of wastewater systems with the aim of ensuring the efficiency, quality, safety and sustainability of wastewater systems and protecting the environment, contributing to improving public welfare in the Kingdom of Cambodia.*





Topic 1: Consensus Formation for Mainstreaming Wastewater Management and Finance

Action Plan of MPWT for Sewerage and Faecal Sludge Management

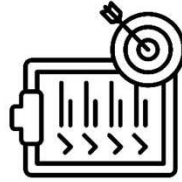
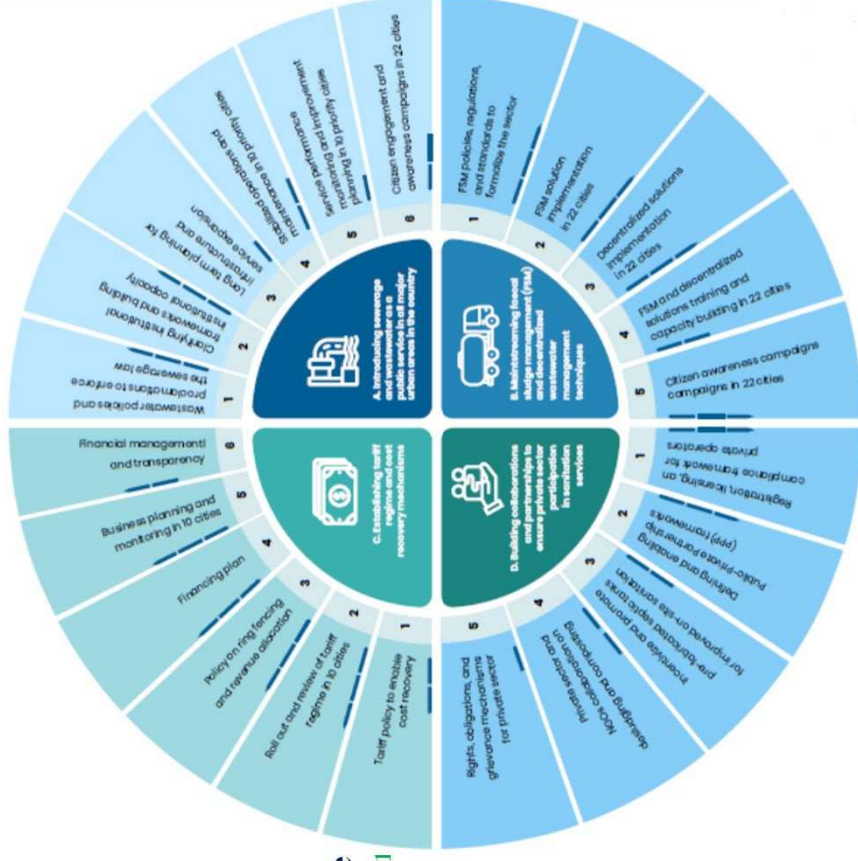
Three Phases: 2025-2035

- Phase 1: 2025-2028
- Phase 2: 2028-2032
- Phase 3: 2033-2035

Four Strategic Pillars

- Introducing sewerage and wastewater as a **public service** in all major urban areas in the country (**six activity cluster**)
- Mainstreaming faecal sludge management and decentralized wastewater management technique (**five activity clusters**)
- Establishing tariff regime and cost recovery mechanisms (**six activity clusters**)
- Building collaboration and partnerships to ensure private sector participation in sanitation services (**five activity clusters**)

Total of 134 Activities

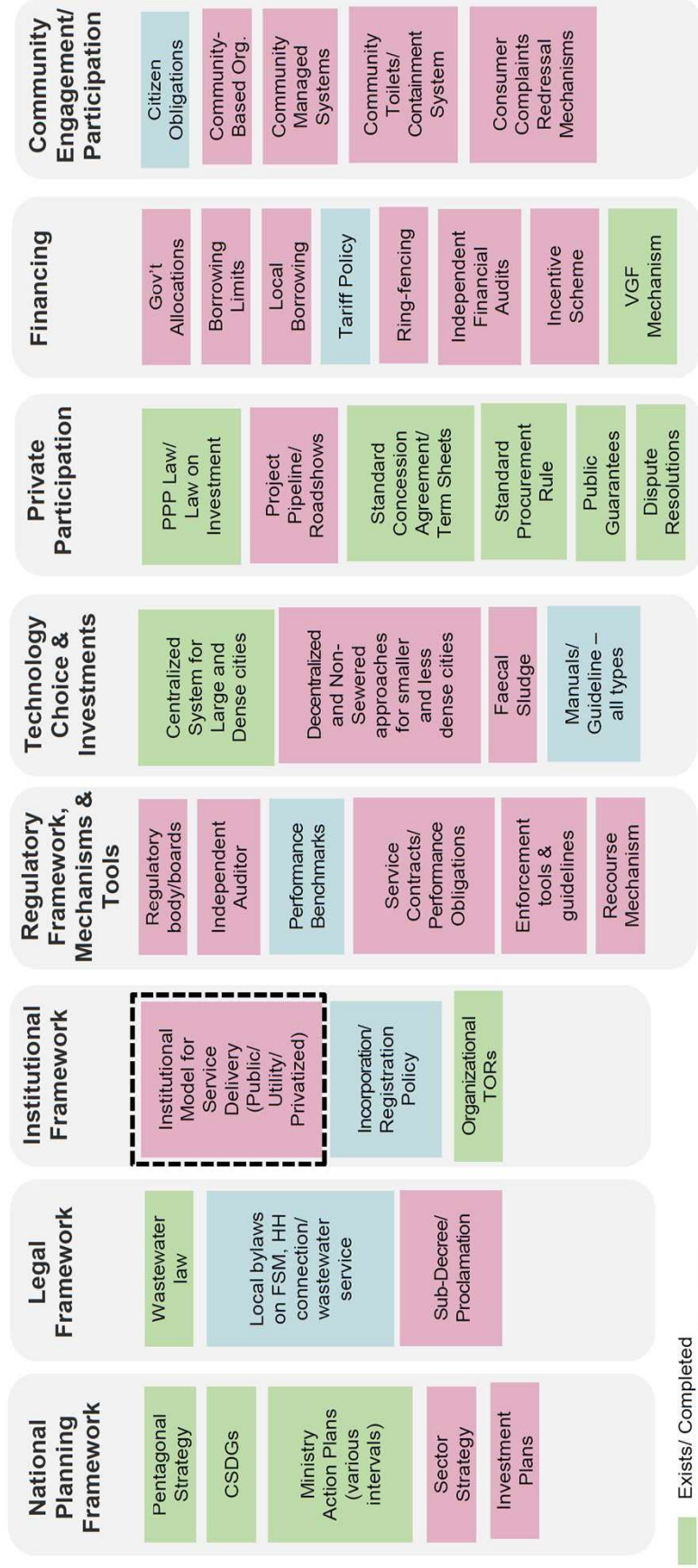




Topic 1: Consensus Formation for Mainstreaming Wastewater Management and Finance

Components needed for Institutional Framework...

Country: Cambodia



Exists/ Completed
Partly/ Under Development
Gap/ To be Developed

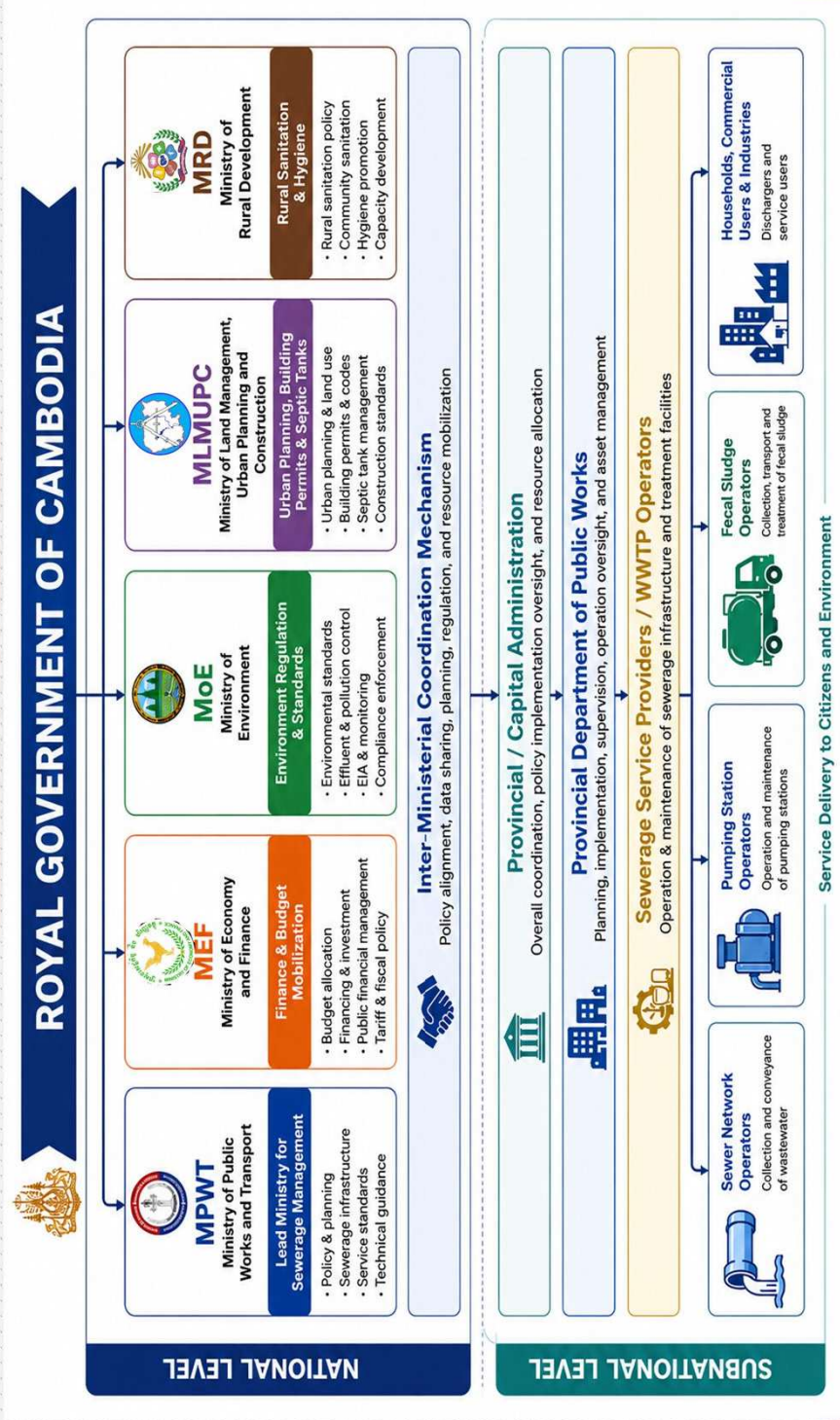
Source: 2024 Current Sewerage Situation in Cambodia



Topic 1: Consensus Formation for Mainstreaming Wastewater Management and Finance

2. Collaboration with Local Governments

Country: Cambodia





Topic 1: Consensus Formation for Mainstreaming Wastewater Management and Finance

2. Collaboration with Local Governments

Country: Cambodia

**MPWT is strengthening the roles of Provincial Administrations and DPWTs under the Sewerage Law while supporting local implementation, sewerage master planning, and capacity building with development partners.*



Strengthening Sub-national Governance

- Clarifying the roles and responsibilities of Provincial Administrations and DPWTs under the Sewerage Law.
- strengthening coordination between **MPWT, Provincial Administrations, and Municipalities** for effective sewerage service management.



Financing & Investment Support

- Mobilizing **central government and development partner financing** for sewerage infrastructure.
- Supporting DPWTs and provincial authorities in planning, implementation, and long-term O&M financing.



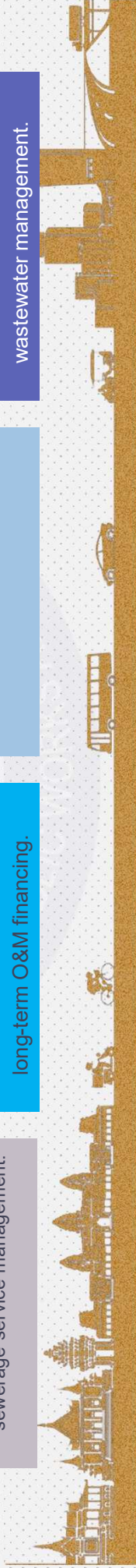
Planning & Project Development

Developing a **Urban Sewerage Master Plan** alongside city-level sewerage development plans, and assisting provinces in preparing investment priorities with phased implementation roadmaps.



Capacity Building & Public Awareness

- Organizing **workshops, technical training, and dissemination** of the Sewerage Law, regulations, and technical guidelines.
- Promoting stakeholder engagement and public awareness on sustainable wastewater management.





Topic 1: Consensus Formation for Mainstreaming Wastewater Management and Finance

2. Collaboration with Local Governments



Provincial level workshops in Siem Reap and Battambang

Objective: to validate the proposed sanitation Behavior Change Communication (BCC) strategy and communication tools



Capacity building to sub-national authorities

Objective:

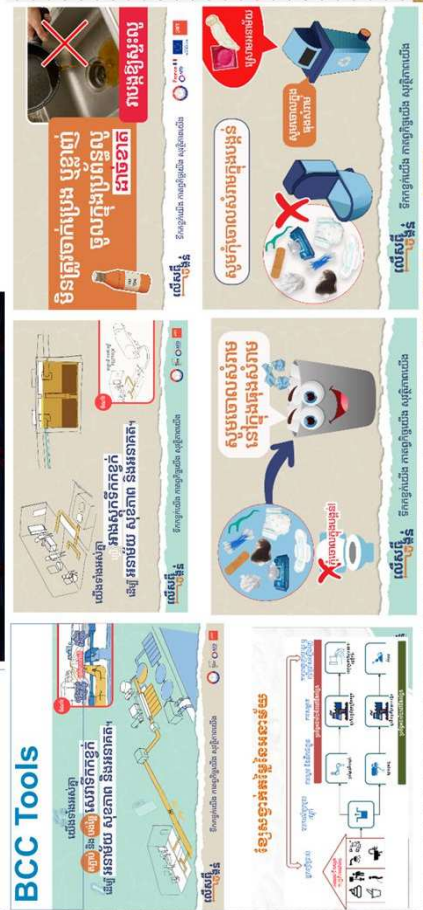
1. To provide practical knowledge on sanitation systems, sanitation services in their cities and sanitation rules and regulations.
2. To build their communication skills (BCC and Social marketing) for facilitate citizen engagement and service uptake.



BCC Campaign

Objective:

1. To increase community and public awareness of the importance of effective wastewater management.
2. To facilitate the engagement of community members with sanitation service providers, government projects, and non-governmental organizations, thereby bridging the gap between public demand and available household services.



BCC Tools



Topic 1: Consensus Formation for Mainstreaming Wastewater Management and Finance

3. Optimal Allocation of Financial Resources, including Bond Issuance, Tax, and User Fees

**Sustainable sewerage financing requires coordinated action across national budgets, development partners, and innovative revenue mechanisms. The following priorities outline a pathway toward long-term cost recovery and service quality.*

National Budget & Development Partner Financing

Prioritize sewerage capital investments through national budget allocations and development partner financing. Most sewerage infrastructure projects are currently funded by development partners, while the Government provides critical budget support for operation and maintenance (O&M) — a role that must be sustained and scaled.

Combined Billing Mechanism

Formulate a combined billing mechanism integrating sewerage fees with water supply services. This approach leverages existing water utility billing infrastructure to improve fee collection rates, reduce administrative costs, and strengthen long-term cost recovery for sewerage operations.

Tariff Framework & PPP Models

*Develop a sustainable tariff framework that reflects the true cost of sewerage services while ensuring affordability. Promote **Public-Private Partnerships (PPP)** to attract private sector investment, technical expertise, and operational efficiency for future sewerage service delivery.*

**Key Policy Direction: Transitioning from donor-dependent capital financing toward a diversified model — combining government O&M support, user fees, and private sector participation — is essential for the long-term sustainability of urban sewerage systems.*





1. Strengthening Wastewater Management in Indonesia’s National Policy

Goals, Targets & the 2025–2029 Safe Sanitation Roadmap

TARGET 2029:

PERCENTAGE OF HOUSEHOLDS WITH ACCESS TO SAFE SANITATION

30%

Decent and Safe

2020–2024



Safe and Sustainable

2025–2029

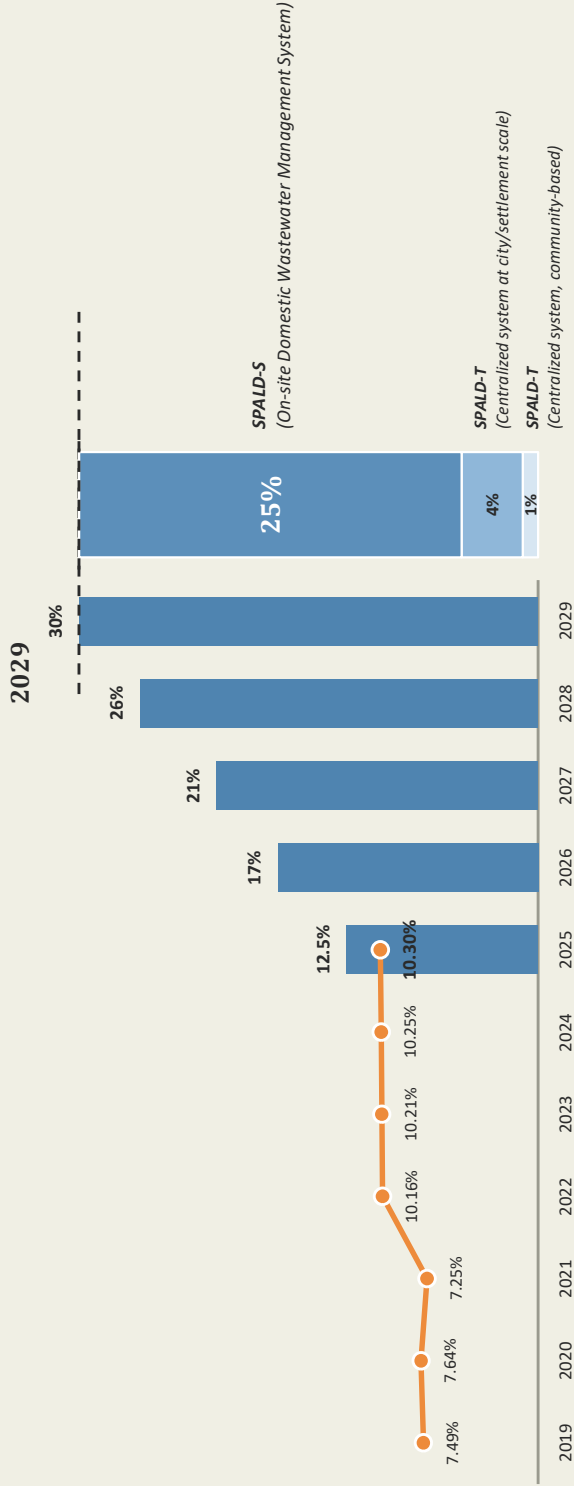
Sustainability Indicators

- Scheduled septage / fecal sludge management services (LTT) in place
- Certified management staff / operators
- Tariffs applied that meet O&M cost recovery

Source: Bappenas, 2025

Safe Access Target – National Medium-Term Development Plan 2025–2029

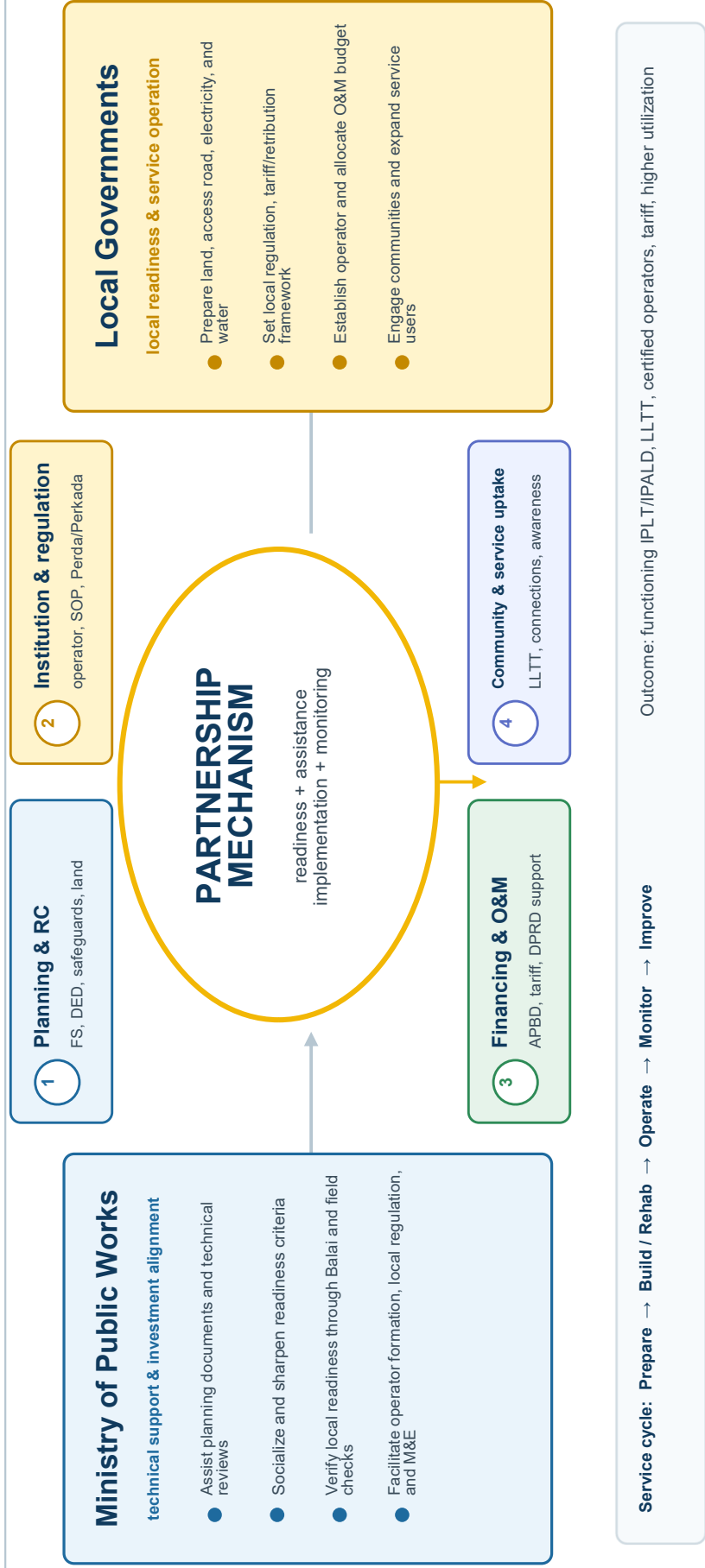
Safe Sanitation Access Achievement





2. Collaboration with Local Governments

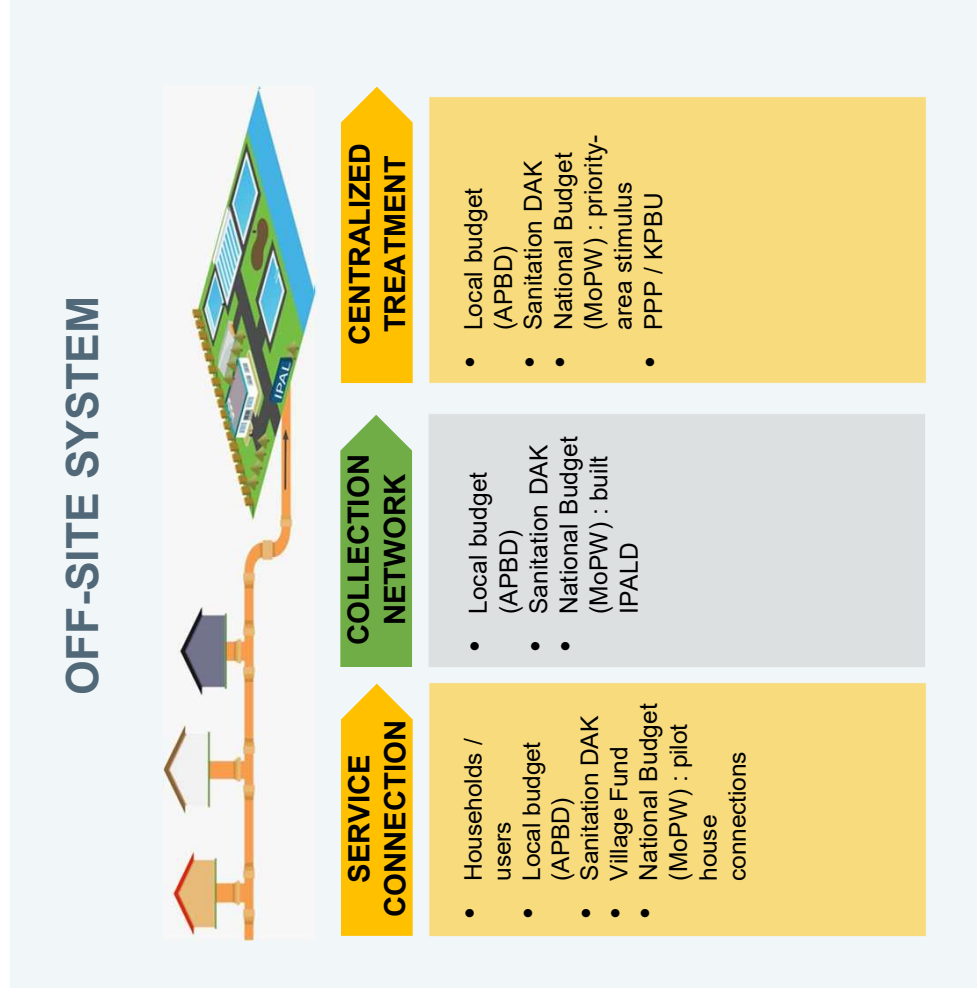
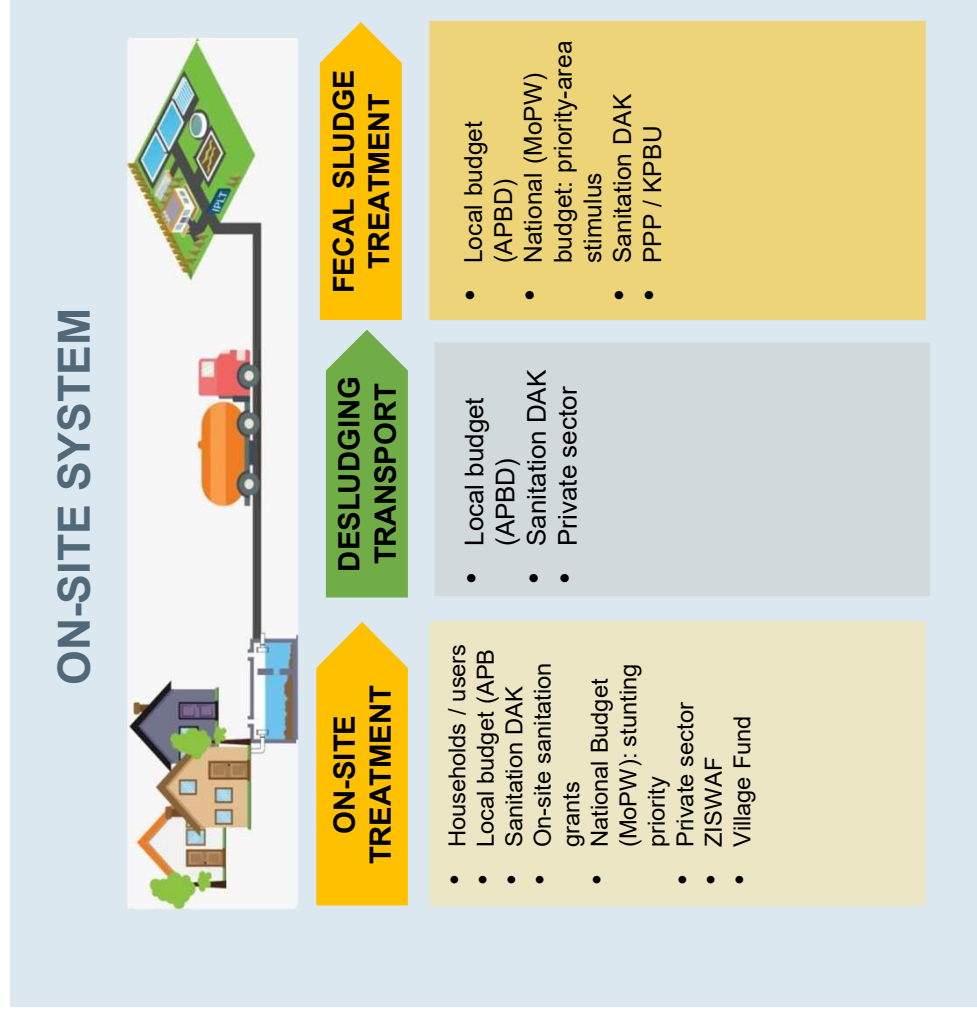
Central–local partnership to ensure wastewater infrastructure becomes sustainable service delivery



Source: Directorate Sanitation Policy Direction 2025–2029



3. Optimizing Financial Resource Allocation



Topic 1: Consensus Formation for Mainstreaming Wastewater Management and Finance



Please provide information about your initiatives regarding the following items described in the AWaP Policy Approach

Duration: From November 2025 to the end of 2026

- ②Collaboration with local governments
- ③Optimal allocation of financial resources, including bond issuance, tax, and user fees.

Country : Japan

Securing Funding for Measures to Address Aging Infrastructure

In January 2025, a large-scale road collapse occurred in Yashio City, Saitama Prefecture, caused by the rupture of an aging sewer pipe. Due to factors such as the aging of infrastructure and a decline in the number of staff, the operating environment for sewerage services is becoming increasingly challenging.



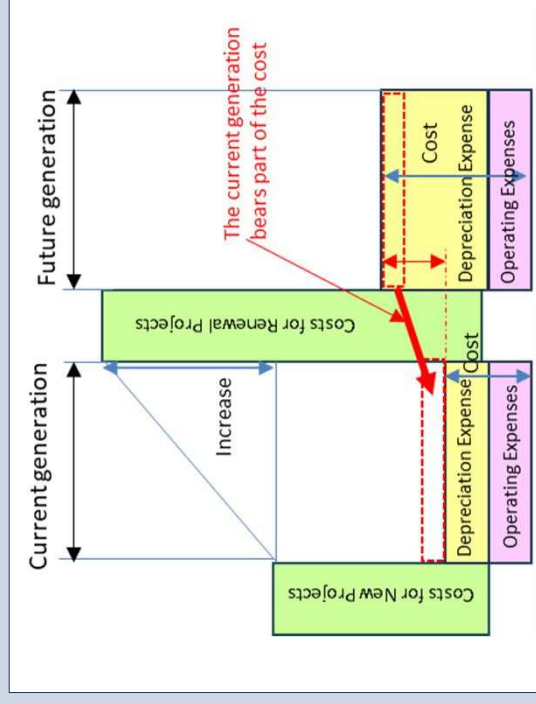
Yashio City's accident (January 2025)

Proper maintenance and management of underground utilities, particularly sewer pipes, is essential, and the following measures were considered.

1. Establishment of Sewer Management Prioritizing Safety
2. Ensuring the Safety of Underground Road Spaces
3. Strengthening the Foundation Supporting Sewerage Management

With regard to matters related to AWaP policy approach, the amended Sewerage Act stipulates the following two points:

- Legislation will be enacted to establish standards for evaluating pipeline safety, and inspection standards for critical pipelines will be strengthened. In addition, to foster public understanding of measures to address aging infrastructure, sewer system operators will be required to disclose information on maintenance status (including inspection results and details of countermeasures).
(②Collaboration with local governments)
- To strengthen the financial foundation of the sewerage utility, the national government encouraged utilities to revise their user fees, resulting in an increase in the proportion of sewage treatment costs covered by user fees, like clarifying the methodology for calculating sewer usage fees, including funds for reconstruction. (③Optimal allocation of financial resources, including bond issuance, tax, and user fees.)





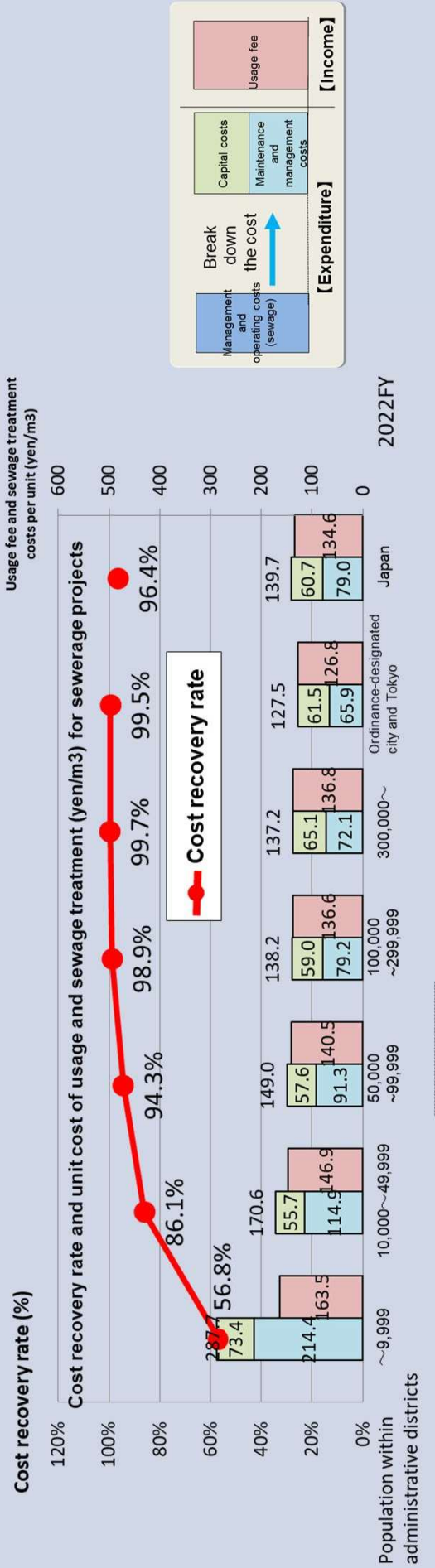
Please provide information about your initiatives regarding the following items described in the AWaP Policy Approach

Duration: From November 2025 to the end of 2026

③Optimal allocation of financial resources, including bond issuance, tax, and user fees.

Country : Japan Strengthening the Management Foundations of Small Business Operators

- A Public Sewerage System Administrator may establish sewerage usage fees and **collect fees** from persons using Public Sewerage Systems **pursuant to the provisions** of Prefectural or Municipal Ordinances.
- The smaller the population, the lower the cost recovery rate.
- A key challenge is to establish a sustainable management framework, and expansion of the wastewater management services across broader regions is required





Background and Necessity

○ In January 2025, a large-scale road collapse occurred in Yashio City, Saitama Prefecture, caused by a rupture in an aging sewer pipe. Due to factors such as aging infrastructure and staff shortages, municipal wastewater management is becoming increasingly challenging.

○ Underground utilities, such as sewer pipes, require proper maintenance and management.

⇒ To realize a resilient and sustainable sewer system, it is necessary to carry out maintenance and reconstruction, strengthen the operational foundation, and ensure safe and smooth road traffic.



The accident scene in Yashio City (January 31, 2025)

Summary of the Bill

Wastewater Management That Prioritizes Safety Above All Else

① A Clear Understanding of the Deterioration Status 【Sewerage Act】

- Enactment of Legal Standards for Assessing the Condition, Safety, and Need for Measures on Sewer Systems
- Information disclosure on maintenance status, such as inspection results by wastewater system operators

② Strategic Restructuring of the Sewerage System 【Sewerage Act】

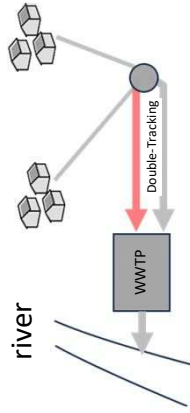
- Implementation of the planned facility retrofit and publication of revenue and expenditure projections by the wastewater system administrator
- Establishment of Principles Regarding Sewerage System Design: Ease of inspection, repair, and reconstruction; emergency measures for disasters or accidents (e.g., dual-line configurations)

③ Strengthening Cooperation with Road Administrators 【Sewerage Act】 【Road Act】

- Incorporate matters requiring road authorities' cooperation into the wastewater project plan



Inspections and Diagnostics Using Drones



Investigation of the Underground Cavity Below the Road Surface



Cavity Exploration Vehicle



Investigation Using Penetration Testing



Summary of the Bill (continued)

2. Ensuring the Safety of Underground Road Spaces

① Strengthening Coordination Between Road Occupants and Road Administrators 【Road Act】

- Establish a system concluding an “**agreement**” between the road occupant and the road administrator to collaborate on inspections and repairs of the road and the occupied property
- ② **Revision of the Road Occupancy Permit System 【Road Act】**
- Add **provisions regarding the maintenance and management of the occupied property** to the Application for a Road Occupancy Permit
- Require submission of a notification upon completion of construction for structures installed on underground roads, including as-built drawings.

3. Strengthening the Foundation Supporting Sewerage Management

① Strengthening the Sewerage Foundation and Promoting Regional Cooperation 【Sewerage Act】

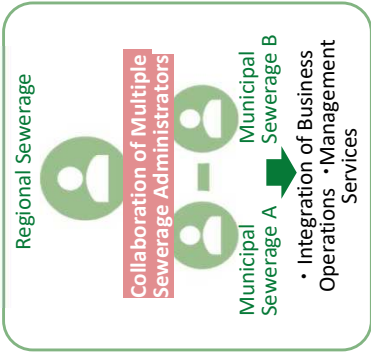
- State “**strengthening the sewerage foundation**” as one of its objectives and establish the national basic policy.
- Establish a system in which prefectures formulate plans to promote **wide-area cooperation** among multiple sewerage authorities
- Establish special provisions allowing prefectures or certain administrative associations to which prefectures belong to manage public sewer systems—which are normally managed by municipalities—as well as a system whereby, through consultation among the managing entities, other local governments may perform inspections, repairs, and renovations on their behalf.

- Establish a system whereby local governments can carry out restoration work on public sewerage systems in the event of disasters or accidents, and clarify the responsibilities for coordinating among relevant parties during such events.
- Clarifying the methodology for calculating sewerage user fees, including funds for retrofit

② **Reviewing sewerage service area 【Sewerage Act】**

- In light of the declining population, review the sewerage service area to transition from centralized to decentralized treatment systems, and establish the necessary regulations

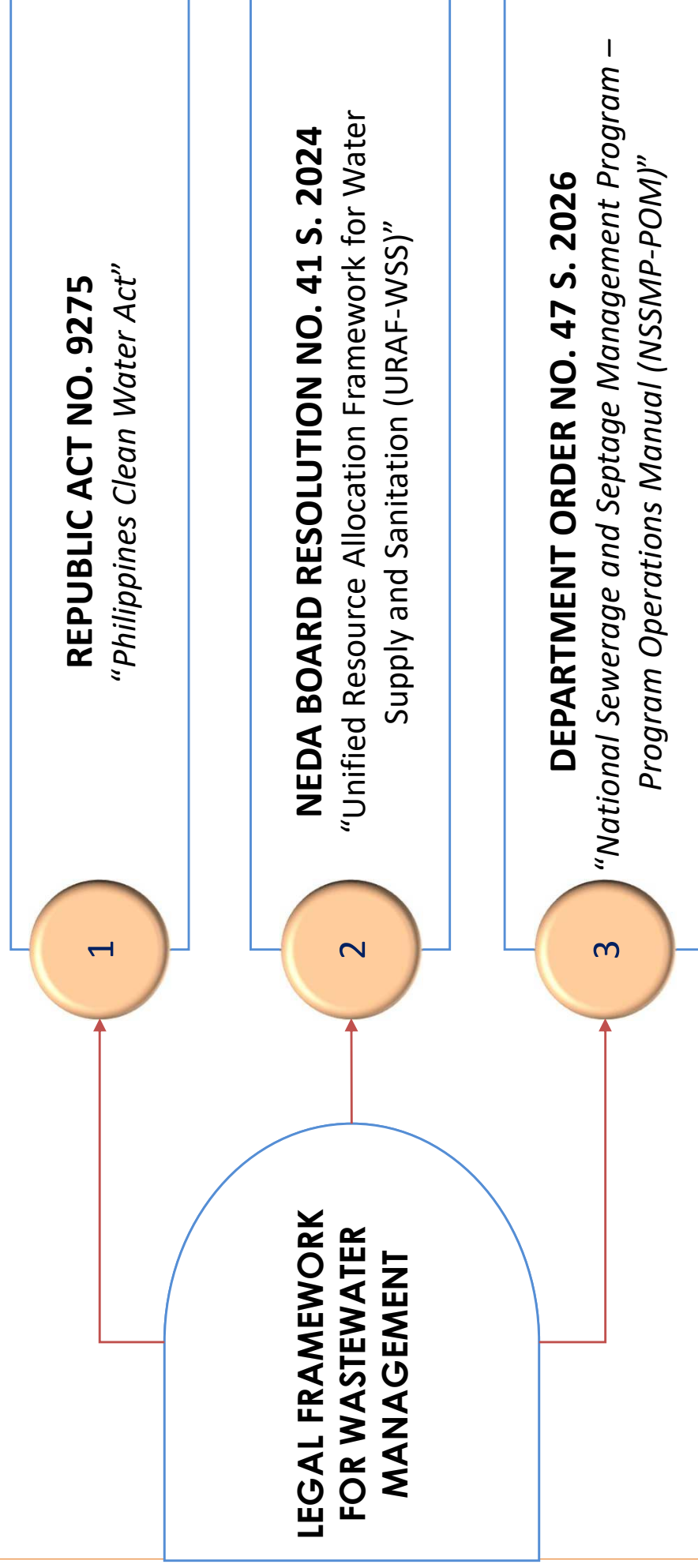
[Prefectures]Wide-area
Collaboration Promotion Plan



▲Wide-area collaboration



1) Prioritizing wastewater management in your country's policy



1) Prioritizing wastewater management in your country's policy

1

REPUBLIC ACT NO. 9275 “*Philippines Clean Water Act*”

To protect and improve water quality through the effective collection, treatment, and disposal of wastewater by promoting sustainable sewerage and septage management systems, reducing water pollution, and protecting public health and the environment.

2

NEDA BOARD RESOLUTION NO. 41 S. 2024 “Adopting the Unified Resource Allocation Framework for Water Supply and Sanitation (URAF-WSS)”

- Policy Directive to all government agencies, to ensure universal access to sustainable and affordable safe water supply and sanitation, by 2030.
- URAF-WSS Modalities : National Government Resources allocation to various WSS players in the form of Technical Assistance Grants, Capital Grants, and Credit Enhancement.
- Eligible Recipients : all water utilities, including LGU- operated WSPs with clear and accountable governance provisions, are eligible recipients.

1) Prioritizing wastewater management in your country's policy

3

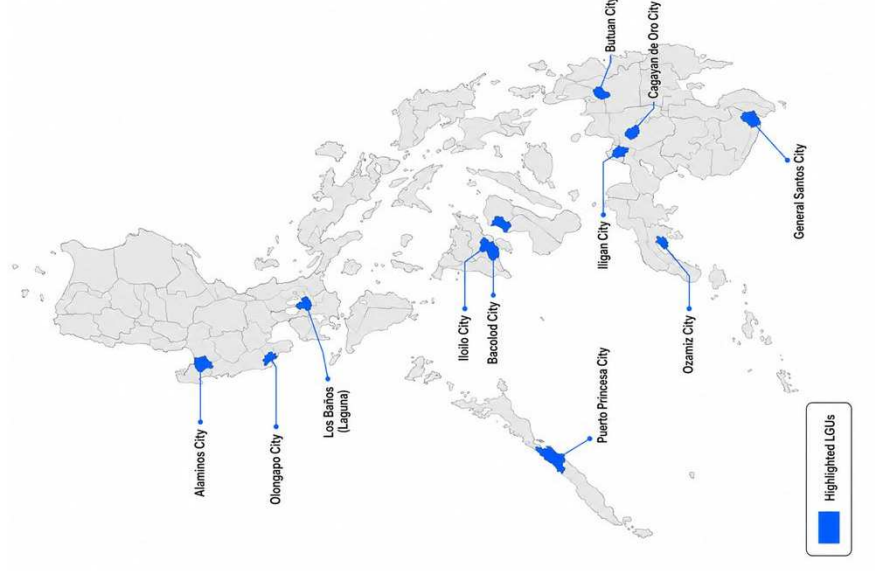
DEPARTMENT ORDER NO. 47 S. 2026
“National Sewerage and Septage Management Program –
Program Operations Manual (NSSMP-POM)”

- Serves as the policy and implementation guide for the NSSMP
- Establishes the policies, procedures, and eligibility requirements for the provision of:
 - a. Feasibility Study (FS) Assistance
 - b. National Government Subsidy
- Covers eligible Local Government Units (LGUs), Water Districts, and LGU-run Water Service Providers (WSPs).
- Aligns the NSSMP with the URAF-WSS under NEDA Board Resolution No. 41, s. 2024.

2) Collaboration with local governments

NATIONAL SEWERAGE AND SEPTAGE MANAGEMENT PROGRAM *(under Philippines Clean Water Act)*

- Provides Technical Assistance (TA) to eligible LGUs, Water Districts, and LGU-run Water Service Providers in preparing Feasibility Studies (FS) for sewerage and septage management projects.
- Provided FS to 11 LGUs since 2016.
- Provided Subsidy to Zamboanga City and Cotabato City



2) Collaboration with local governments

NATIONAL SEWERAGE AND SEPTAGE MANAGEMENT PROGRAM (under Philippines Clean Water Act)

- On-going nationwide Promotional Campaign and Training Workshop to enhance LGU capacity and encourage project development. (8/16 Regions)



2) Collaboration with local governments

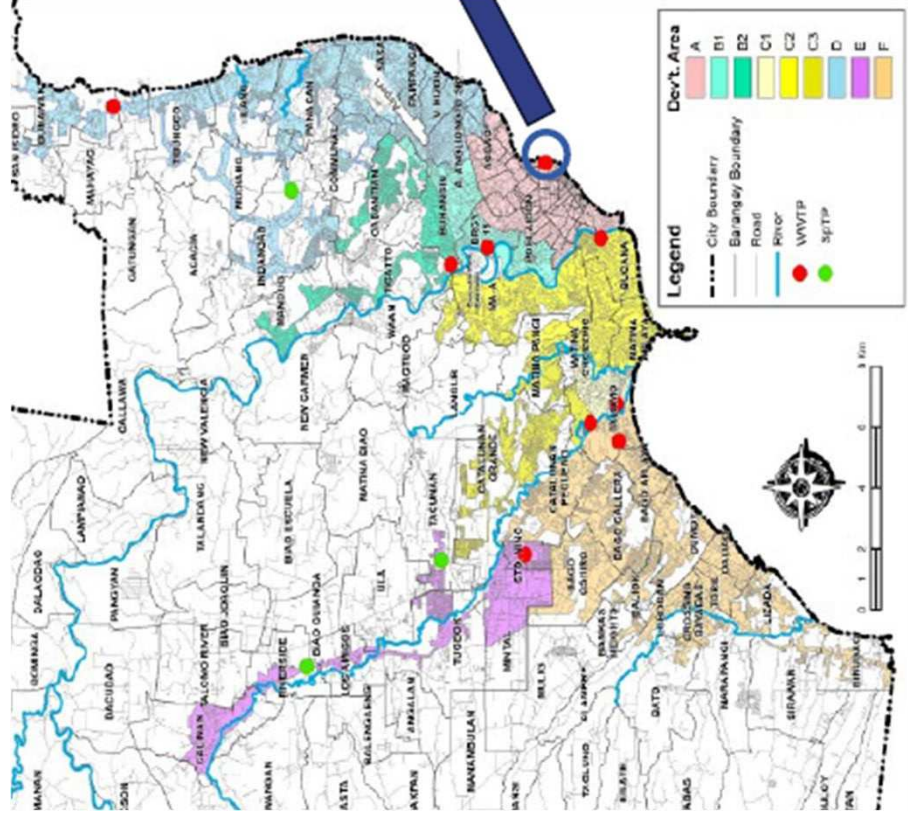
Accelerated Water Supply and Sanitation Project in Selected Areas (AWSPA), World Bank

- The AWSPA is a program-type project that has been conceptualized to combine capital investment and policy reform to hasten universal access to water supply and sanitation
- List of projects:
 - a. Bohol Bulk Water Supply, Distribution, and Sanitation Project
 - b. Siargao Island Water Supply and Septage Management Project
 - c. Jolo, Sulu Water Supply and Sanitation
 - d. Institutional and Capacity Development
 - e. Technical Assistance



2) Collaboration with local governments

Davao City and Metro Cebu Sewerage Development Master Plan Project JICA



A. Davao City Sewerage Development Master Plan and Pre-FS

- Master Plan (Area A to F) has been developed and presented to the City and Water District.
- Pre-FS of Priority Area (Area A, pink colored) is undergoing.
- Pre-FS results is expected to be finalized Early 2027.

*Part of Area A (9,000 m³ out of 80,000 m³) is the scope of the Pre-FS.

-MBR(Membrane Bio Reactor), Underground

-Initial cost is around PHP 6 -7 billion.

-Expected construction starts: 2030

-Expected operation starts: 2033 - 34.

2) Collaboration with local governments

Davao City and Metro Cebu Sewerage Development Master Plan Project JICA

B. Metro Cebu Sewerage Development Master Plan and Pre-FS

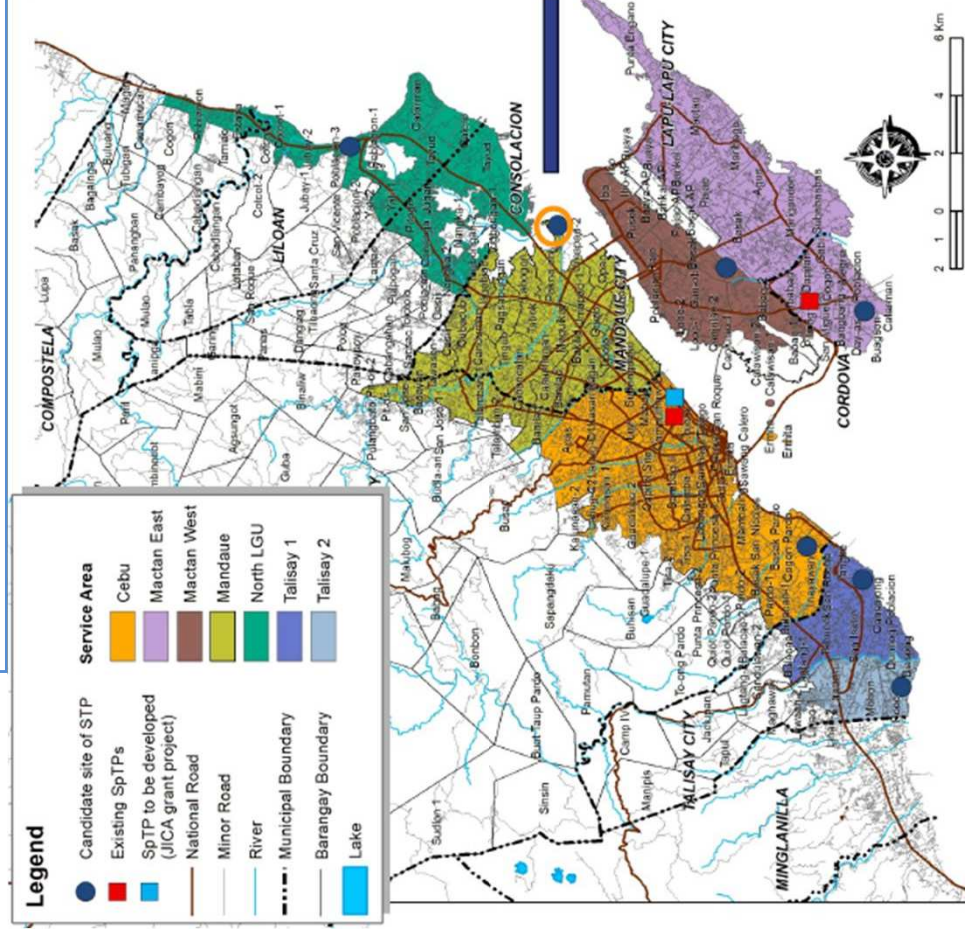
- Master Plan (8 LGUs) has been developed and presented to the Cities and Water District.
- Pre-FS of Priority Area (Mandaue City) just started.
- Pre-FS results is expected to be finalized in Q3 2027.

*Part of the City (30,000 m3 out of 240,000 m3) is the scope of the Pre-FS.

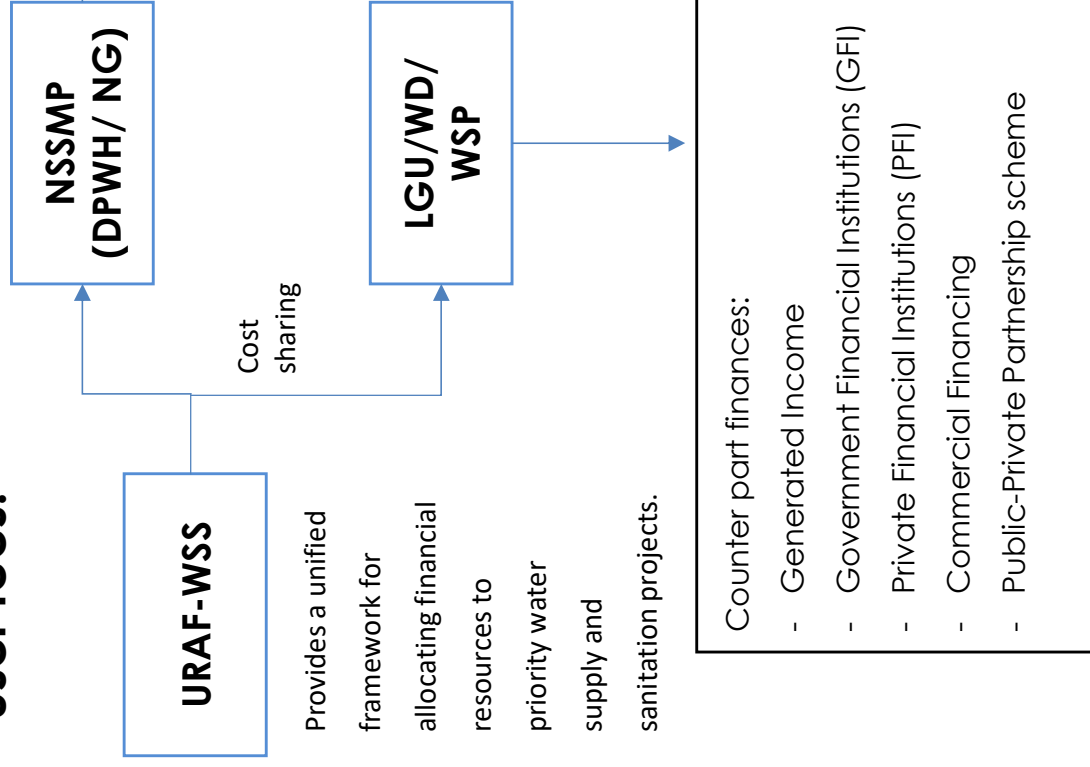
-Treatment technology, costs are under study.

-Expected construction starts: 2031

-Expected operation starts: 2038



3) Optimal allocation of financial resources, including bond issuance, tax, and user fees.



Target Group	Modality/Scheme	Implementation Rules
LGU-run WSPs covered under the NEDA Board Resolution No. 6 (s. 2017) on the NSSMP ^a	In accordance with the existing provisions of the NSSMP i.e., TA + CS Cap for CS is up to 50% for sewerage, septage, or combined sewerage and septage management projects	Pending the amendments to the NEDA Board Resolution on the NSSMP, shall continue to be in accordance with the existing provisions of the NSSMP
Category A or B WDs or LGU-run WSPs outside of the NSSMP coverage	TA + OBA Cap for OBA is up to 50% for sewerage, septage, or combined sewerage and septage management projects	Disbursement phasing: 60% upon development of a sewerage, septage, or combined sewerage and septage management system, and 40% upon verification of at least 6 months of sustained sanitation provision <u>Development or commercial loan</u> : 50% remaining <u>Affordability rate</u> : 5% of the average income of low-income families in the service area <u>Operating cost coverage</u> : 120%
Category C or D WDs or LGU-run WSPs outside of the NSSMP coverage	TA + OBA Level of OBA: Up to 100% of the total expenditures	Disbursement phasing: 40 to 50% upfront; 50 to 60% once septage management objectives have been reached

^a Highly urbanized cities and all other cities, and first-class municipalities



Please provide information about your initiatives regarding the following items described in the AWaP Policy Approach

Duration: From November 2025 to the end of 2026

①Prioritizing wastewater management in your country's policy

Country : Vietnam

- Currently, in Vietnam, wastewater management has been placed as a vital strategic policy, especially in the context of rapid urbanization and unpredictable climate change.
- Resolution No. 22/DH, dated January 23, 2026, of the 14th National Congress of the Communist Party of Vietnam, states: “Regarding the environment: The forest cover rate will be maintained at 42%; the rate of treatment and reuse of wastewater discharged into the environment of river basins will reach 65-70%...”
- Current policy is shifting significantly from an "end-of-pipe" approach (collection and discharge) to a "circulation, reuse, and green economy" mindset, where "wastewater is a resource" and "users pay for the service.”
- Previously, wastewater management was primarily regulated in a fragmented manner under the Environmental Protection Law, the Water Resources Law, and related decrees (such as Decree 80/2014/ND-CP). Currently, the Government's top priority is **institutional unification**. Therefore, the Ministry of Construction has been assigned by the Government to develop the Law on Water Supply and Sewerage. The Ministry of Construction is currently actively finalizing the draft to submit to the National Assembly, aiming to establish a comprehensive and unified legal framework to resolve conflicts between state management of water resources and urban technical infrastructure.



Please provide information about your initiatives regarding the following items described in the AWaP Policy Approach

Duration: From November 2025 to the end of 2026

② Collaboration with local governments

Country : Vietnam

- During this period, we are undergoing a major institutional transformation: shifting from a four-tiered government (central, local, district, and commune) to a three-tiered government (central, local, and commune).
- In addition, decentralization and delegation of power are being implemented very strongly, giving localities more authority for proactive planning, investment in construction, and operation of key projects to maximize resource utilization.
- Due to removing intermediate levels and the performing additional functions, tasks, and powers, localities are facing some limitations and difficulties:
 - + The professional capability, digital skills, and ability to adapt to the new governance model of some local officials and civil servants are still uneven; the implementation of decentralized and delegated tasks at the grassroots level still faces difficulties.
 - + Several legal regulations related to decentralization, delegation of authority, and delineation of jurisdiction between the central and local governments in the field of drainage and wastewater treatment.
 - + The integration, standardization, and interoperability of specialized databases are still slow; data among sectors are not synchronized, and a unified data system for management and operation has not yet been formed.



Please provide information about your initiatives regarding the following items described in the AWaP Policy Approach

Duration: From November 2025 to the end of 2026

③Optimal allocation of financial resources, including bond issuance, tax, and user fees.

Country : Vietnam

- At present, the funding allocated to drainage and wastewater treatment projects mainly comes from the state budget: central or local governments' budget.
- Socialized capital investment(mobilized private investment) in construction of drainage and wastewater treatment projects accounts for a very small rate.
- For drainage and wastewater treatment projects that are put into operation, the costs for operation, maintenance, and protection mainly come from 2 sources:
 - + Local government budget
 - + Revenue from drainage service price (for localities that have implemented sewerage service price collection). However, this source only covers the operational phase. For renovation, repair, and upgrading, central or local government budgets must still be used.
- Other sources: such as bond has not yet been applied in Vietnam.



Topic 2

Consensus building for centralized and decentralized wastewater treatment systems

Topic 2: Consensus building for centralized and decentralized wastewater treatment systems

From Chair's Summary

11. An additional measure in the AWaP policy approach was proposed for optimal wastewater treatment. Specifically, developing plans for the diffusion of centralized and decentralized treatment systems, adopting the Citywide Inclusive Sanitation (CWIS) approach, and implementing them in a phased manner as quickly as possible. Partner countries agreed on the policy approach.

12. Good examples and initiatives based on the above proposed policy shall be discussed at the next Operations Committee.



In Topic 2, AWaP partner countries will present case studies on the optimal allocation of centralized and decentralized wastewater treatment systems, as well as government approaches and methodologies for implementing such optimal allocation, followed by discussions.

AWaP Policy approach for Optimum Wastewater Treatment Systems

AWaP partner countries confirm that wastewater treatment facilities include decentralized systems serving one or more households based on population density, topography, and regional connectivity, as well as centralized systems serving community or city-wide areas, and share the following policy.

- An optimal development of wastewater treatment facilities, adopting the Citywide Inclusive Sanitation (CWIS) approach, is necessary to ensure all people have access to properly managed wastewater treatment services.
- It is important for administrative departments responsible for wastewater treatment and environmental affairs and local governments in partner countries to take the lead in creating deployment plans for the efficient and effective development of wastewater treatment facilities, including decentralized and centralized treatment systems.
- The deployment plan for wastewater treatment facilities determines the wastewater treatment services citizens receive. When developing this plan, we should fulfill our accountability to citizens by considering not only economic factors but also regional characteristics such as water environment conservation, construction feasibility, and the difficulty of securing land.
- To enable early operation of wastewater treatment services, it is important for administrative departments and local governments responsible for wastewater treatment and environmental affairs in partner countries to take the lead and systematically and progressively develop wastewater treatment facilities while considering the status of related infrastructure, such as water supply systems. Furthermore, they should periodically review deployment plans to reflect changes in social conditions.
- The administrative departments responsible for wastewater treatment and environmental affairs in partner countries should share initiatives related to the optimal deployment of wastewater treatment facilities, learn from each other, and develop better approaches.



Country: Bangladesh

Consensus Formation for Mainstreaming Wastewater Management and Finance

Optimal allocation of financial resources including bond issuance, tax and user fees.

- Bangladesh continues financing wastewater infrastructure mainly through Annual Development Programme (ADP), government budget, development partner loans/grants (JICA, World Bank, ADB) and WASA user charges.
- Bangladesh is improving cost recovery for O&M through tariff reforms and utility strengthening.
- To achieve long-term sustainability, financing mechanisms should gradually include user service charges, Municipal financing, Public–Private Partnerships (PPP), Polluter-pays approaches where appropriate. A diversified financing model would reduce dependence on external funding and improve long-term operation and maintenance.





Consensus building for centralized and decentralized wastewater treatment

Country: **Bangladesh**

Case Study	Laws & Guidelines	Planning Entity	Location Optimization Strategy
Dhaka Sewerage Master Plan, Dhaka Dasherbandi WWTP (Centralized)	National Water Policy (1999); Bangladesh Water Act (2013); National Sanitation Strategy (2005); Dhaka Sewerage Master Plan	Local Government Division (LGD) and DWASA	Regional wastewater treatment plants (WWTPs) located based on population density, drainage catchments, land availability, and proximity to rivers to reduce pumping costs.
Chattogram Sewerage Master Plan & Ongoing Sewerage Project (Centralized)	Bangladesh Water Act (2013); National Water Policy (1999); Chattogram Sewerage Master Plan; Environmental Conservation Rules	LGD, Chattogram WASA.	Six catchment-based sewerage system with phased STPs. Locations selected using topography, drainage basins, future urban growth, and coastal discharge conditions.
National FSM Framework (Decentralized)	National FSM Framework; CWIS Framework; National Strategy for Water Supply & Sanitation; SDG 6	LGD, DPHE, Municipalities (Pourashavas), DoE	Decentralized FSM services prioritized in municipalities and towns where sewerage is not technically or financially feasible. Selection based on service coverage, sludge generation, transport distance, and lifecycle cost.
Khulna Integrated Sewerage & FSM Project Hybrid (Centralized + FSM)	National FSM Framework; Environmental Conservation Rules; ADB Project Guidelines	LGD, Khulna WASA, DPHE, ADB, DoE	Combines sewerage, WWTPs, and fecal sludge treatment to maximize coverage while minimizing investment and operating costs.





Topic 2: Consensus Building for Centralized and Decentralized Wastewater Treatment Systems

Country: Cambodia

Planning for Centralized and Decentralized Wastewater Treatment Systems

Laws & Guidelines

- Sewerage Law (2024)
- Urban Sewerage Master Plan **(On Going)**
- Technical Guidelines for centralized and on-site wastewater systems
- Technical Guidelines for Decentralized Wastewater Treatment System **(On Going)**



Responsible Entities

- National Level** : Policy, regulation, financing, and coordination with development partners.
- Sub National & DPWTs:** Local planning, implementation, asset management, and O&M.
- Operator & Utilities** : Service delivery, community coordination, and system operation.

Planning Approach

Centralized WWTPs

- ☐ **Best suited** for major cities, dense urban areas, industrial zones, and tourism destinations with sewer networks. Provides efficient wastewater collection, high treatment performance, and easier monitoring.

Decentralized & On-site Systems

- ☐ **Best suited** for low-density, peri-urban, and scattered communities where sewer networks are not practical. Offers flexible, cost-effective solutions when supported by effective sludge management and regular desludging.

Current Initiatives

→ National Guideline of Decentralized System

Developing comprehensive master plans at national and city levels.

→ Coverage Expansion

Expanding the sewerage coverage and access to sewerage system of remote community.

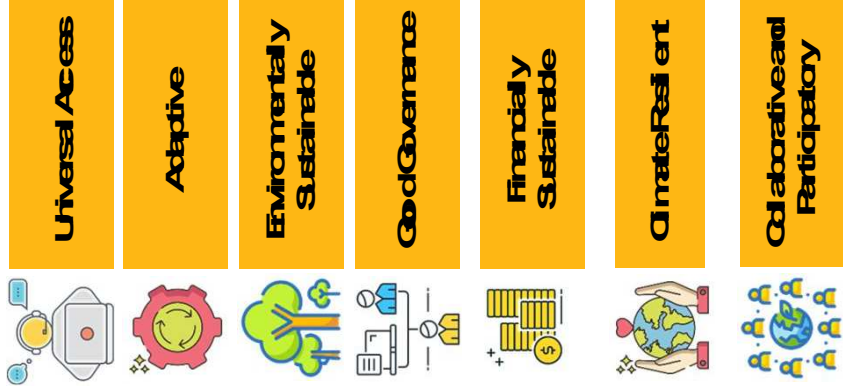
→ Urban Development Integration

Integrating sewerage of decentralized with the Central system for the outskirts of urban area



CONCEPT OF SAFELY MANAGED SANITATION SERVICES

Citywide Inclusive Sanitation (CWIS)



- Sanitation services are available at all times and accessible to everyone.
- Sanitation infrastructure has sufficient capacity and coverage to safely manage wastewater generated by the entire population.

Sanitation services are responsive to the varying needs, capacities, and local characteristics of different regions.

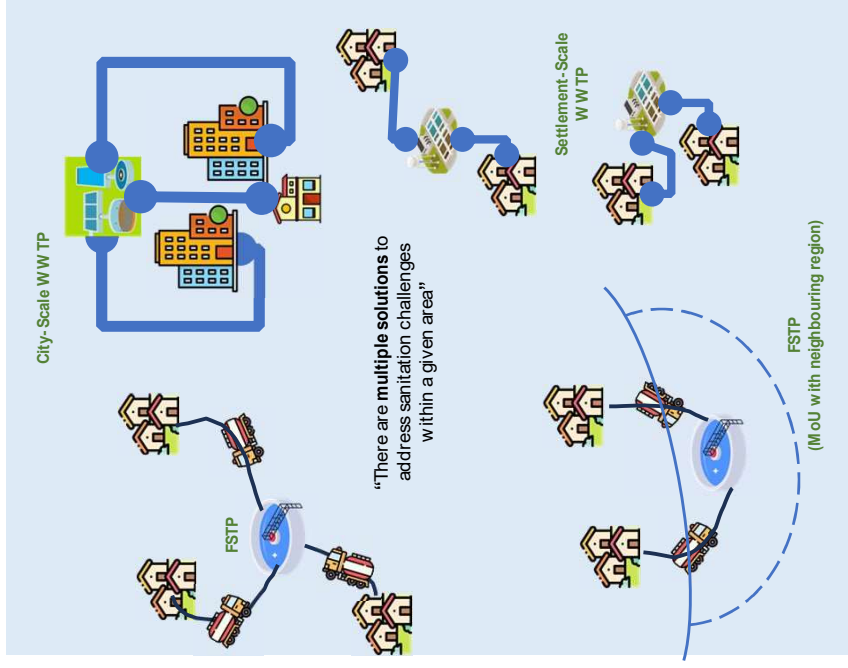
Sanitation services comply with environmental and aesthetic standards, preventing pollution and minimizing environmental impacts.

Effective governance is supported by regulatory frameworks, institutional arrangements, service standards and procedures, capacity building, and monitoring and evaluation frameworks.

Operators are capable of securing and managing financial resources independently to ensure long-term sustainability.

Sanitation systems are designed to anticipate, prepare for, respond to, recover from, and adapt to climate change impacts, risks, and vulnerabilities.

Transforming the perception of domestic wastewater management from merely fulfilling public obligations into an attractive business ecosystem that encourages private sector participation and creates economic value.



Sumber: National Development Planning Agency (Bappenas) (2019)

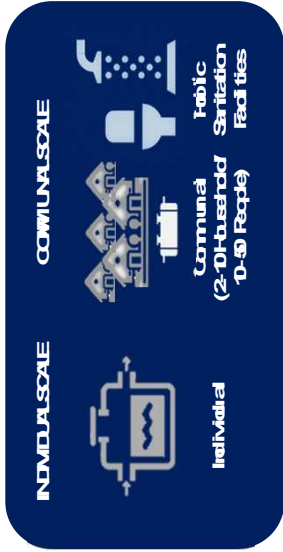


DOMESTIC WASTEWATER MANAGEMENT SYSTEM

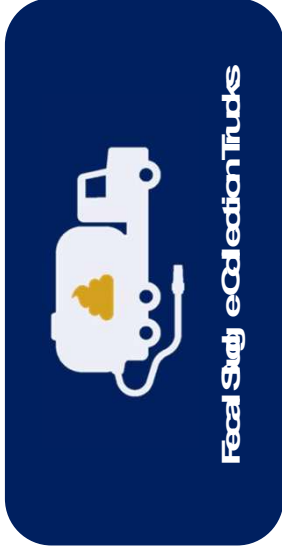


ON-STREET DOMESTIC WASTEWATER MANAGEMENT SYSTEM

ON-STREET TREATMENT SUB-SYSTEM



TRANSPORT SUB-SYSTEM

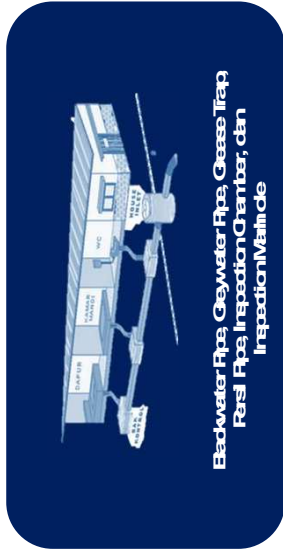


FINAL SLUDGE TREATMENT SUB-SYSTEM

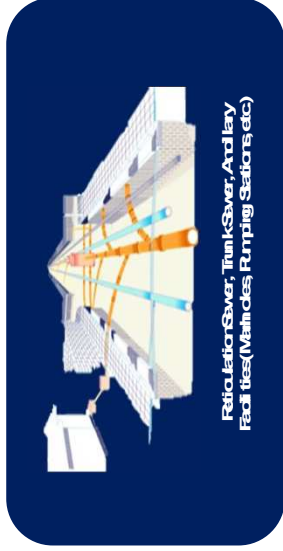


OFF-STREET DOMESTIC WASTEWATER MANAGEMENT SYSTEM

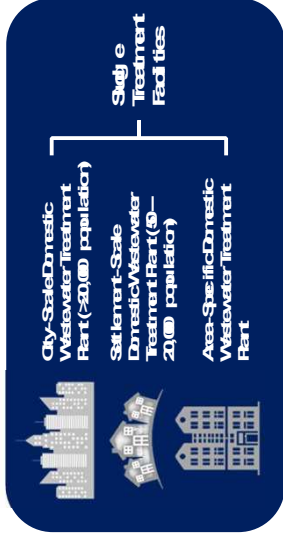
SERVICE SUB-SYSTEM



COLLECTION SUB-SYSTEM



OFF-STREET TREATMENT SUB-SYSTEM



Source : Ministry of Public Works Regulation No 4/2017

INFRASTRUCTURE DEVELOPMENT APPROACH FOR DOMESTIC WASTEWATER MANAGEMENT



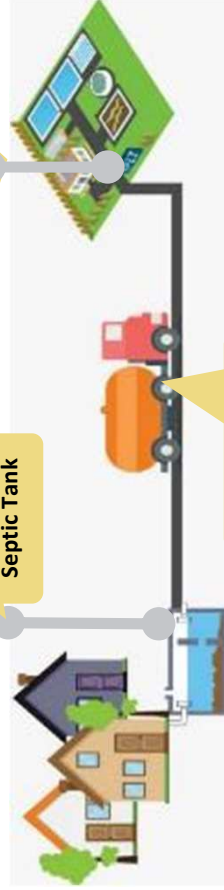
ON-SITE DOMESTIC WASTEWATER MANAGEMENT SYSTEM

1 Fecal Sludge Treatment Plant (FSTP)

- Urban areas served by on-site systems with at least 2,000 households using septic tanks.
- Areas without an FSTP or where the utilization rate of the existing FSTP exceeds 70%.
- Prioritized for regencies/municipalities with limited fiscal capacity.

2 SEPTIC TANKS

- Urban areas with a population density below 150 persons/ha and rural areas with a population density above 25 persons/ha.
- Priority areas for stunting reduction, targeting low-income households and Extreme Poverty Alleviation programs.



On-site Domestic Wastewater Management Service Chain

OFF-SITE DOMESTIC WASTEWATER MANAGEMENT SYSTEM

1 CITY-SCALE & SETTLEMENT-SCALE WWTP

- Areas with a population density above 50 persons/ha (subject to technical justification), with priority given to areas exceeding 150 persons/ha.
- Regencies/cities with sufficient financial capacity for post-construction operation and maintenance.

2 COMMUNITY-BASED SETTLEMENT WWTP

- Areas with a population density above 50 persons/ha (subject to technical justification), with priority given to areas exceeding 150 persons/ha.
- Prioritized for low-income households and Extreme Poverty Alleviation programs.
- Communities with a high level of public participation.

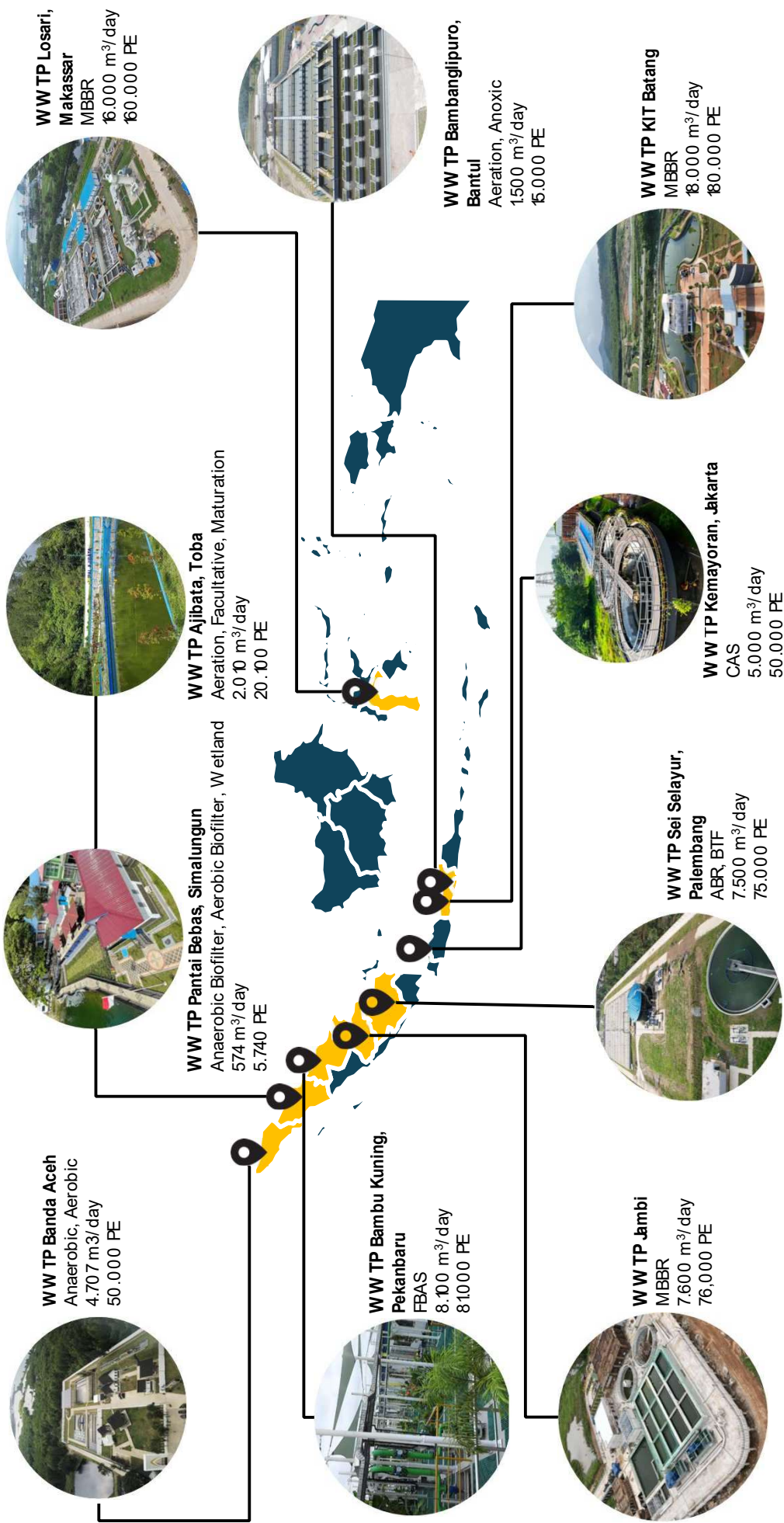


Off-site Domestic Wastewater Management Service Chain



COMPLETED OFF-SITE DOMESTIC WASTEWATER MANAGEMENT SYSTEMS IN INDONESIA

UKEMENPUPU
KEMENTERIAN NEGARI UNTUK BAWAH

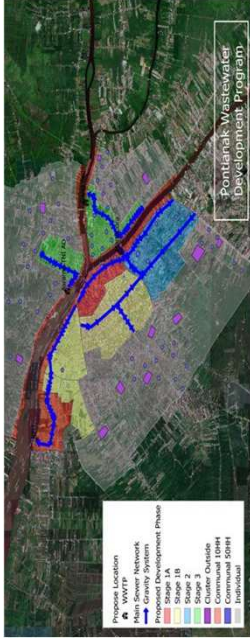




ONGOING CITY-SCALE OFF-SITE DOMESTIC WASTEWATER MANAGEMENT PROJECTS



Pontianak



PROJECT SCOPE IN PONTIANAK

- Consists of 1 Consulting Services Package, 1 WWTP Package, 4 Sewerage Packages

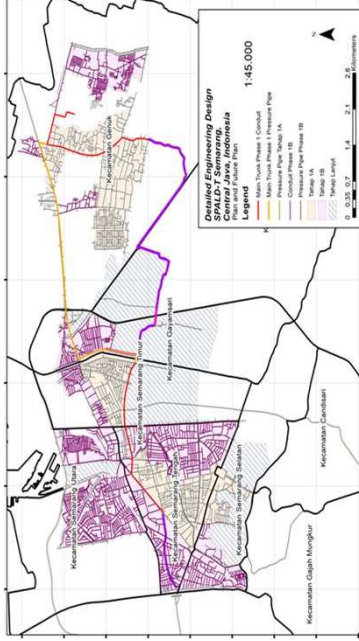
NIPAH KUNING

- Construction of WWTP with a capacity of **12,000 m³/day WWTP** integrated with a **100 m³/day fecal sludge receiving facility**, and a minimum flow of **1,600 m³/day**.
- Installation of **55 km** of sewer network.
- Pilot project comprising **1,500 house connections**, plus **6,000 additional house connections** financed by the local government budget

MARTAPURA

- Construction of a **12,000 m³/day WWTP**, with a minimum flow of **1,600 m³/day**.
- Installation of **56.7 km** of sewer network.
- Pilot project comprising **1,500 house connections**, plus **7,500 additional house connections** financed by local government budget

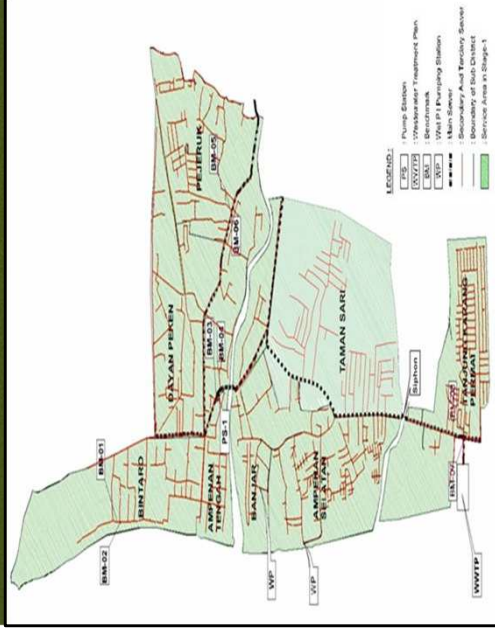
Semarang



PROJECT SCOPE IN SEMARANG

- Construction of WWTP with a capacity of **25,000 m³/day** and a minimum flow of **2,500 m³/day**, integrated with a **150 m³/day fecal sludge receiving facility**, expandable to **250 m³/day**.
- Installation of **111.6 km** of sewer network.
- Pilot project comprising **4,352 house connections**, with an additional **10,000 house connections** financed by APBD under Phase 1A (2,500 connections annually)
- Consists of 1 Consulting Services Package, 1 WWTP Package, 5 Sewerage Packages

Mataram



- Construction of an **8,000 m³/day WWTP**, with a minimum flow of **2,000 m³/day**.
- Installation of **72.32 km** of sewer network.
- Pilot project comprising **4,000 house connections**, with an additional **9,500 house connections** financed by APBD.
- Consists of 1 Consulting Services Package, 1 WWTP Package, 2 Sewerage Packages

PROJECT OVERVIEW

The **Jakarta Sewerage Development Project (JSDP) Zone 1** aims to improve water environmental quality and sanitation access in Jakarta. The project was included in the **2015–2019 Blue Book** as one of Indonesia's national priority development projects and is also designated as a **National Strategic Project** under **Presidential Regulation No. 109 of 2020**.

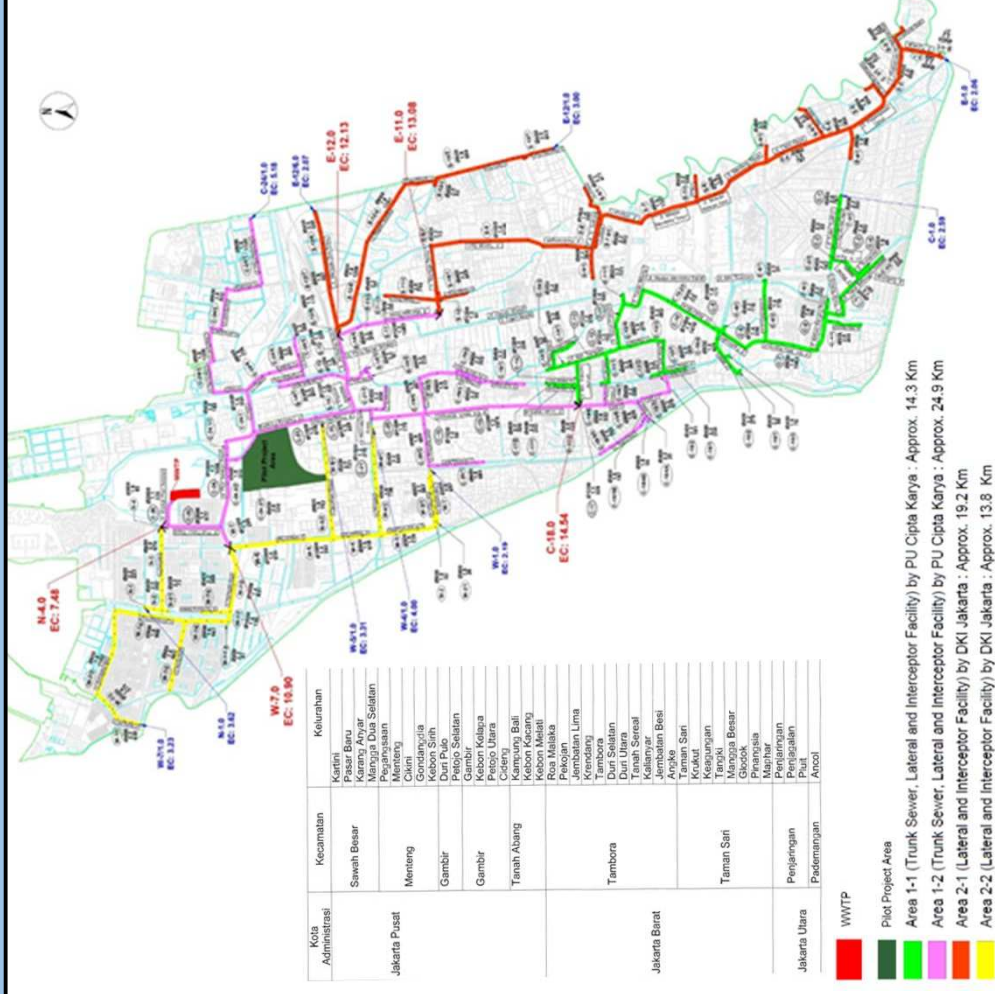
The Zone 1 WWTP occupies an area of **3.9 hectares** and has a planned treatment capacity of **240,000 m³/day**. The system is designed to serve approximately **989,389 people**, equivalent to **220,000 House Connections (HCs)**.

PROJECT LOCATION

- **Zone 1 WWTP:** Pluit Sub-District, Penjaringan District, North Jakarta
- **Service Area:** Central Jakarta, West Jakarta, and North Jakarta
- **Coverage:** 8 districts and 41 sub-districts

PROJECT SCOPE

- Supervision Consultant for the Works Under Jakarta Sewerage Development Project (Zone 1)
- Package 1: Construction of WWTP
- Package 2: Construction of Sewers in Area 1-1
- Package 3: Construction of Sewers in Area 1-2
- Package 4: Construction of Sewers in Pilot Area





JSDP Zone 6
(Phase 1)

Jakarta Sewerage Development Project (JSDP) Zone 6 (Phase 1)

Loan JICA No: IP-579/ Register: 1HLVA6EA

- Lender : JICA
- Executing Agency : Directorate General of Human Settlement, Ministry of Public Works
- Implementing Agency : Balai PPK Jakarta Metropolitan
- Loan Period : 06/02/2020–06/02/2027
- Payment Method : Direct Payment
- Loan Amount : ￥ 30,980,000,000



PROJECT OVERVIEW
The Jakarta Sewerage Development Project (JSDP) Zone 6 (Phase 1) aims to improve water environmental quality and sanitation access in the Special Capital Region (DKI) of Jakarta. The Zone 6 Domestic Wastewater Treatment Plant (WWTP) will be located in Duri Kosambi, West Jakarta, with a treatment capacity of 47,000 m³/day in Phase 1 and 282,000 m³/day at the Ultimate Phase. The WWTP site covers an area of 7.13 hectares. JSDP Zone 6 (Phase 1) is designed to serve 176,400 people across 12 districts in four administrative cities: Central Jakarta, West Jakarta, North Jakarta, and South Jakarta.

PROJECT LOCATION
▪ Zone 6 WWTP: Duri Kosambi, West Jakarta ▪ Service Area: Central Jakarta, North Jakarta, West Jakarta, and South Jakarta

PROJECT SCOPE
▪ Consulting Services on Design and Supervision Jakarta Sewerage Development Project Zone 6 (Phase 1) ▪ Package 1: WWTP ▪ Package 2: Trunk Sewer ▪ Package 3: Service Pipe, Lateral Pipes and Persil Pipes in Model Area



Topic 2: Consensus building for centralized and decentralized wastewater treatment systems

Please describe your country's efforts to optimize the location of wastewater treatment facilities. If providing case studies, please include the following information.

For example: laws and guidelines; the entity responsible for developing the plan (central government, local government); and specific plans for optimal location.

Country: Japan

Rural sewerage system is wastewater treatment facility in rural area.

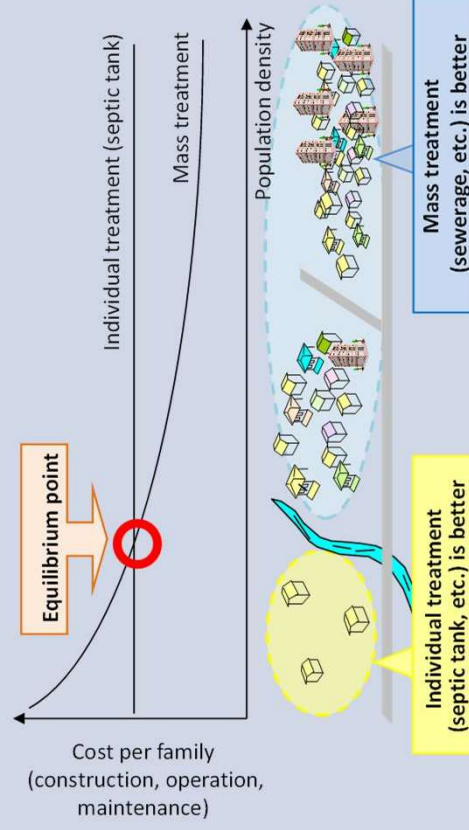
Domestic wastewater treatment tank is wastewater treatment facility in an area of low population density.



Sewerage system is wastewater treatment facility in urban area.

From the 5th operation committee materials

Municipal governments are drawing up master plans for wastewater treatment that take into account the characteristics of wastewater treatment system and local factors such as population density, in order to develop efficient wastewater treatment facilities.



- Compare the total cost of all expenses (construction and maintenance) incurred during the expected period of use of the facility, converted to an amount per year of use of the facility
- Depending on population density, the area where centralized or decentralized system should be selected will change.

Topic 2: Consensus building for centralized and decentralized wastewater treatment systems



Please describe your country's efforts to optimize the location of wastewater treatment facilities. If providing case studies, please include the following information.

For example: laws and guidelines; the entity responsible for developing the plan (central government, local government); and specific plans for optimal location.

Country : Japan

In the future, as population density declines in areas where sewer systems are already in place, the need to switch from sewer systems to Johkasou is expected to increase.

⇒ It is necessary to clarify the procedures for abolishing or reducing sewer service areas in light of future population decline and other factors.

〈Examples of Conversion Needs in Local Governments〉

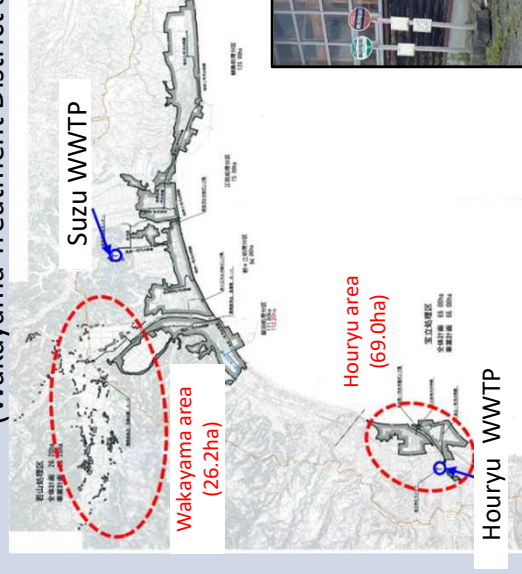
Suzu City, Ishikawa Prefecture

- In restoring sewerage areas that suffered severe damage from the Noto Peninsula Earthquake, the city is planning to convert them to Johkasou areas

Minamiizu Town, Shizuoka Prefecture

- The conversion from fishing village sewage systems to Johkasou has already been implemented
- Have begun considering a transition to Johkasou in existing sewer service areas

■ Examples of conversion in Suzu City, Ishikawa Prefecture
(Wakayama Treatment District and Hōtatsu Treatment District)



- Emergency restoration through the installation of temporary Johkasou
(Full-scale restoration using public Johkasou is planned for the future)



Topic 2: Consensus building for centralized and decentralized wastewater treatment systems

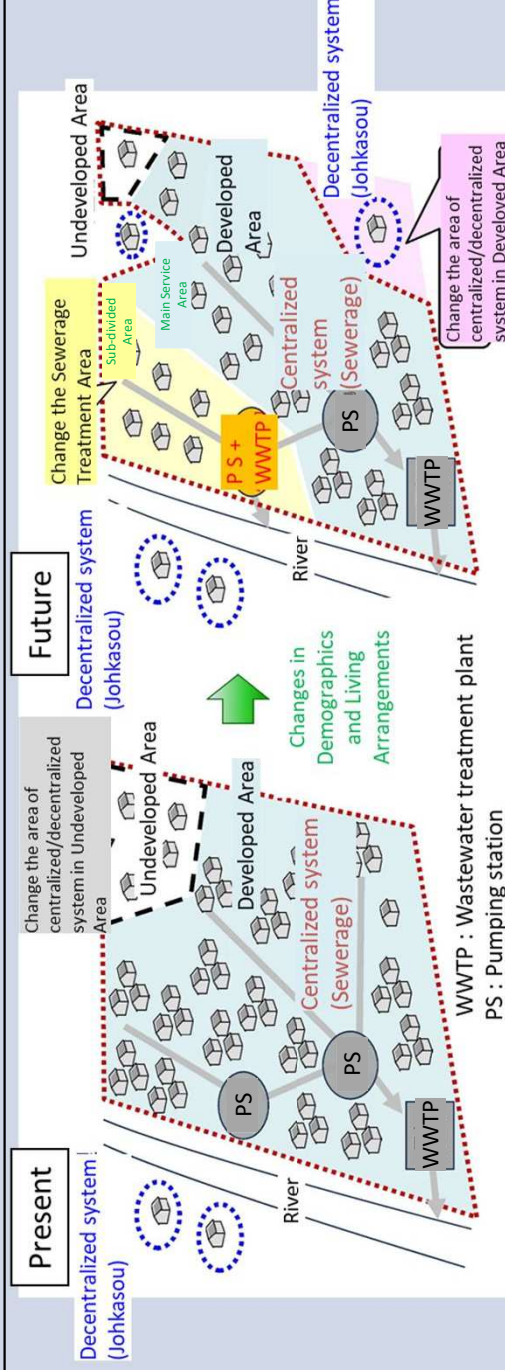


Please describe your country's efforts to optimize the location of wastewater treatment facilities. If providing case studies, please include the following information.

For example: laws and guidelines; the entity responsible for developing the plan (central government, local government); and specific plans for optimal location.

Country : Japan

Going beyond the conventional approach to optimizing the allocation of centralized/decentralized system, the need to convert existing centralized processing areas to decentralized system is discussed, and specific procedures will be established in accordance with the amended sewerage Act.



Clarify the procedures for abolishing or reducing sewer service areas in consideration of natural, economic, and social conditions, such as population decline.

- When abolishing a sewerage system, the area and timing of the abolition must be publicly announced after obtaining the consent of users in advance.
- In the publicly announced areas, the obligation to connect to the sewer system will be waived even before the system is abolished, allowing for conversion to Johkasou.

Optimization of Wastewater Treatment Facility Locations in the Philippines

Current Challenges:

- Rapid urbanization in Metro Manila and Highly Urbanized Cities (HUCs)
- Limited sewerage coverage in many LGUs
- High cost of expanding conventional sewer networks
- Different communities require different wastewater management solutions



Key Outcomes:

- Improved wastewater service coverage
- Optimized investment costs
- Reduced pollution to rivers and coastal waters
- Sustainable and climate-resilient wastewater management



Please describe your country's efforts to optimize the location of wastewater treatment facilities. If providing case studies, please include the following information.

For example: laws and guidelines; the entity responsible for developing the plan (central government, local government); and specific plans for optimal location.

Country : Vietnam

- Legal documents: Law on Urban and Rural Planning, Law on Environmental Protection, Law on Public Investment, Law on Investment, Law on Construction, and the draft Law on Water supply and Sewerage.
- The Decree No. 80/2014/ND-CP of the Government, on drainage and wastewater treatment dated August 6, 2024.
- Local governments shall issue regulations on the management of drainage activities based on the actual situation of their localities.

The above are the main legal documents that directly affect the construction of centralized and decentralized wastewater treatment systems from the stage of planning, investment resources for construction, management, operation, maintenance, and protection after the project is completed and put into use.

Topic 3

Review of AWaP partner countries' achievements

Topic 3: Review of AWaP partner countries' achievements

Background

- The fourth General Meeting stated that the fifth General Meeting, scheduled in 2027, would summarize the AWaP achievements.

The 4th AWaP General Meeting Chair summary

「At the 2027 General Meeting, we will summarize AWaP's achievements through its 2030 conclusion.」

How to summarize the AWaP achievements

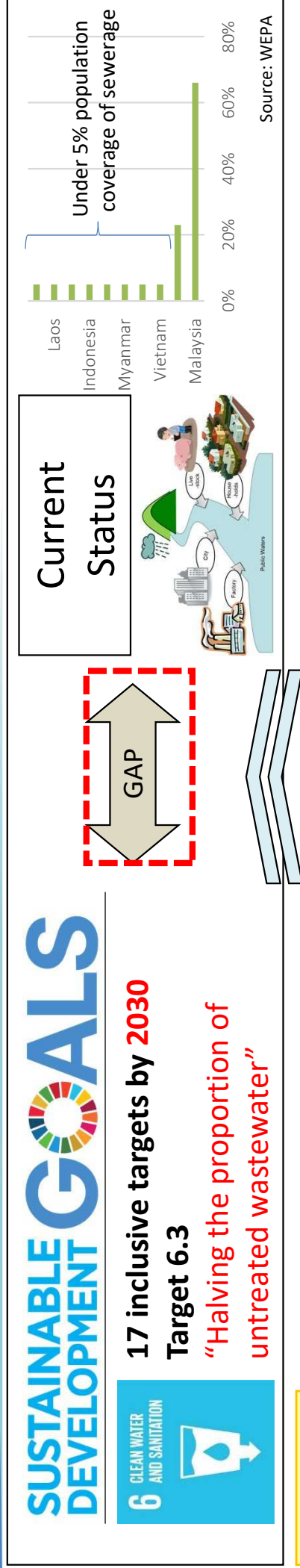
6th AWaP Operations Committee

Review of initiatives undertaken by each country since the establishment of AWaP for the following items:

- Target achievement status for SDG 6.3
- AWaP has been aiming to bring the partner countries' "priority," "knowledge and information," and "finance and technology" for wastewater management closer to SDG 6.3.
Your country's status of improvement regarding these challenges.
- Initiatives that you have to focus on for developing wastewater treatment facilities in your country

5th AWaP General Meeting

AWaP will review its activities to date based on reviews from partner countries. It will also determine AWaP's activities leading up to the 6th General Meeting in 2030.



Gap

- Low priority of wastewater management
- Lack of knowledge and information
- Lack of budget and appropriate technology

Objectives

1	Raising Awareness on Wastewater Management	2	Monitoring of Wastewater Management	3	Resolving Common Challenges
Activities					
1.1	Spreading the importance of wastewater management and the outcome of AWaP through international conferences	2.1	Submitting of annual report from partner countries	3.1	Mainstreaming wastewater management
1.2	Spreading information to promote the understandings of the effectiveness of wastewater management to citizens and officials in partner countries	2.2	Publishing AWaP synthesis report	3.2	Promote Centralized and Decentralized wastewater treatment systems
				3.3	Trenchless sewer pipe constructing
				3.4	Sharing and discussing sewerage technologies and case studies adapted to local conditions
				3.5	Sharing and discussing common challenges



Review of AWaP’s Partner Countries’ Achievements
Review 1: Target achievement status for SDG 6.3

Country: Bangladesh

Theme	Contents			
Status of wastewater treatment development between 2015 and 2025 based on the wastewater coverage rate	Sewerage service coverage	2015	32.8% (2020)	40.3% (2023)
	definition of wastewater coverage rate			
	This indicator indicates the diffusion rate of wastewater treatment facilities. The indicator is calculated by dividing the total number of people using wastewater treatment facilities such as sewerage systems, rural community sewerage facilities and by total population and expressing the result as a percentage.			
evaluation of prospect for achieving SDG 6.3 in 2030 across the following three steps. A. Achieve B. Almost achieve C. Other than the above	Evaluation of the target achievement in 2030 C			





Country: Bangladesh

Review of AWaP's Partner Countries' Achievements

Review 2: Outcomes through activities regarding following items since the establishment of AWaP in 2018

Theme	Contents
Low priority of wastewater management	• Expansion of Fecal Sludge Management (FSM) programs • Operation of Dasherbandi Sewage Treatment Plant (Dhaka) • Development of Chattogram Sewerage System • Promotion of Citywide Inclusive Sanitation (CWIS) • Construction of municipal Fecal Sludge Treatment Plants • National Action Plan for FSM implementation
Lack of knowledge and information	• Increased technical knowledge through AWaP workshops and regional meetings. • Improved national wastewater monitoring and SDG 6.3.1 reporting. • Enhanced capacity of government officials through training.
Lack of budget and appropriate technology	• Improved planning for wastewater infrastructure development. • Stronger collaboration with international development partners for technical and financial support. • Greater awareness of sustainable and resource-efficient treatment technologies.





Review of AWaP's Partner Countries' Achievements

Country: Bangladesh

Review 3: What should your country do to enhance future wastewater treatment facilities?

Theme	Contents
Low priority of wastewater management	• Raise wastewater management as a national environmental and public health priority. • Integrate wastewater treatment targets into urban development plans and climate adaptation strategies. • Strengthen enforcement of wastewater discharge regulations for industries and municipalities. • Promote wastewater reuse as a resource for agriculture, industry, and urban landscaping.
Lack of knowledge and information	• Establish a national wastewater information system with updated data on sewer networks, treatment plants, and wastewater flows. • Develop regular monitoring and reporting systems aligned with SDG 6.3.1 (safely treated wastewater). • Provide training programs for engineers and operators. • Strengthen cooperation between government agencies, universities, research institutions, and international organizations. • Increase public awareness about wastewater pollution and safe sanitation practices.
Lack of budget and appropriate technology	• Develop sustainable financing mechanisms, including wastewater service fees and public–private partnerships. • Encourage local research and innovation to adapt technologies to Bangladesh's climate, land availability, and technical capacity. • Improve operation and maintenance capacity to ensure long-term performance of treatment facilities. • Encourage PPP.





Topic 3: Review of AWaP's Achievements by Partner Countries

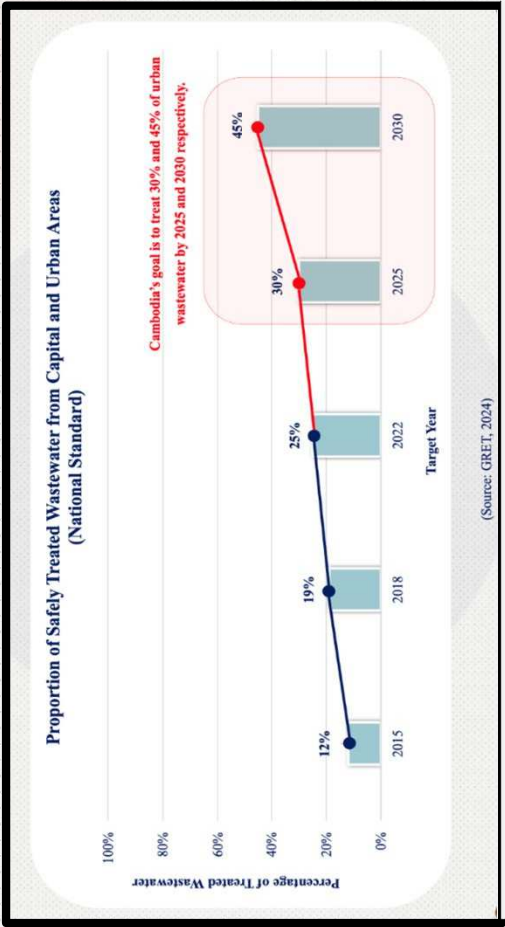
Review 1: Target Achievement Status for SDG 6.3

Country: Cambodia

Theme	Contents			
Please report your status of wastewater treatment development between 2015 and 2025. Your report is based on the wastewater coverage rate. (Source: CSDGs 2016-2023) based on data from the Ministry of Planning (MoP), MPWT, and MOE.	Sewerage Service Coverage	2015	12%	2025
		Your definition of wastewater coverage rate SDG 6.3.1 (%)= $\frac{\text{Volume of wastewater safely treated (meeting national standards)}}{\text{Total volume of wastewater generated}}$ the percentage of wastewater safely treated according to national standards out of the total wastewater generated in the country.		
Please evaluate your prospect for achieving SDG 6.3 in 2030 across the following three steps. A. Achieve B. Almost achieve C. Other than the above	Evaluation of the target achievement in 2030 ☒ C. Other than the above.			



Topic 3: Review of AWaP's Achievements by Partner Countries



SDG 6 snapshot in Cambodia



Source: UN-Water SDG 6 DATA Portal

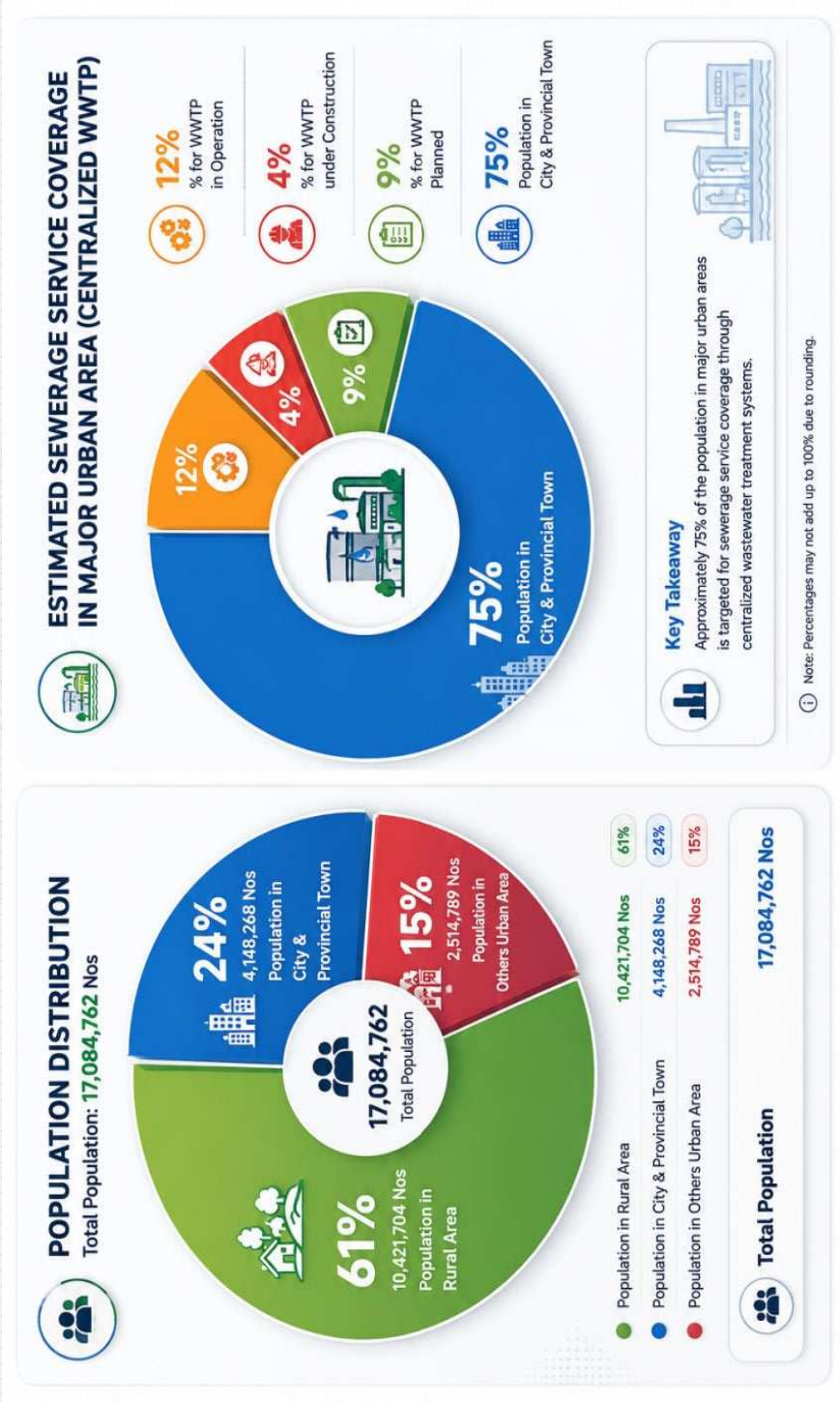
Table 1: The targets and indicators of Cambodia's SDG regarding the urban wastewater sector

Target	Indicators	baseline (%)	Target (%)			
		2015	2018	2022	2025	2030
4.a Build and upgrade education facilities that are child, disability, and gender sensitive and provide safe, non-violent, inclusive, and effective learning environments for all	4.a.2 Proportion of pre-primary, primary, and secondary schools with basic wastewater facilities	57	68.7	79.1	87	100
6.2 By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations	6.2.1 Proportion of rural population (rural households) using safely managed sanitation services. 6.2.1.1. Proportion of rural population (rural households) have basic access to sanitation services.	27	30	34	38	50
6.3 By 2030, improve water quality by reducing pollution, eliminating dumping, minimizing the release of hazardous chemicals and materials, halving the proportion of untreated wastewater, and substantially increasing recycling and safe reuse globally.	6.3.1 Proportion of wastewater (industrial wastewater) safely treated (based on national standard) 6.3.2 Proportion of wastewater (from capital city municipality and urban areas) safely treated (based on national standard)	12	19	29	40	70
		12	19	25	30	45



Topic 3: Review of AWaP's Achievements by Partner Countries

Estimated Sewerage Service Coverage by Centralized WWTPs in Cities and Provincial Towns





Topic 3 : Review of AWaP Partner Countries' Achievements

Review 2: Outcomes through activities regarding the following items since the establishment of AWaP in 2018

- ◆ Low Priority of Wastewater Management
Initiatives for mainstreaming and their outcomes.
- ◆ Lack of knowledge and Information
Activities, including human resource development, monitoring the development of wastewater treatment facilities, and researching wastewater management systems in other countries
- ◆ Lack of Budget and Appropriate Technology
Fiscal systems, initiatives regarding user fees, and the development of technical standards, etc.

Theme	Contents
<i>Low priority of wastewater management</i>	• Promulgation of the Sewerage Law (2024), elevating wastewater management as a national priority. • Development of the National Sewerage Master Plan and supporting regulations. • Increased government commitment and integration into urban development planning.
<i>Lack of knowledge and information</i>	• Capacity building through AWaP, JICA, ADB, AFD, GGGI and development partners. • Technical training, study visits, workshops and knowledge exchange. • Development of technical standards, guidelines, and digital sewerage management initiatives.
<i>Lack of budget and appropriate technology</i>	• Mobilized investment from ADB, AFD, JICA, EDCF, AIIB and other development partners for sewerage infrastructure. • Formulating combined billing with water supply and sustainable tariff mechanisms. • Developing national technical standards and introducing technologies for WWTP operation and sewer asset management.



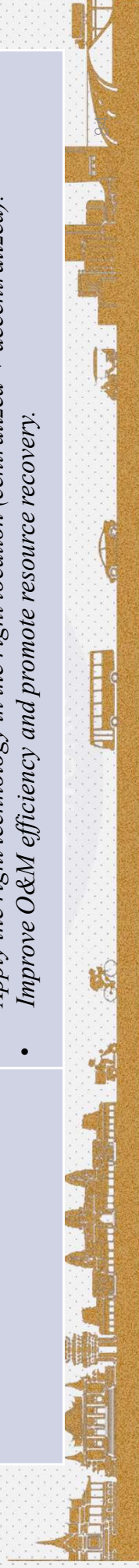


Topic 3: Review of AWaP Partner Countries' Achievements

Review 3

What should your country do to enhance future wastewater treatment facilities?

Items	Current Challenges and Actions to be Taken
Low priority of wastewater management	• Mainstream wastewater into national development policy. • Complete the regulatory framework under the Sewerage Law. • Increase public awareness and inter-ministerial coordination. • Integrate sewerage planning into all urban development.
Lack of knowledge and information	• Develop national technical standards and guidelines related to sewerage work. • Build and secure human resources, human capital. • Establish DX of wastewater information system . • Enhance monitoring, research and international cooperation.
Lack of budget and appropriate technology	• Introduce sustainable tariff and financing mechanisms. • Expand PPPs and development partner investment. • Apply the right technology in the right location (centralized + decentralized). • Improve O&M efficiency and promote resource recovery.





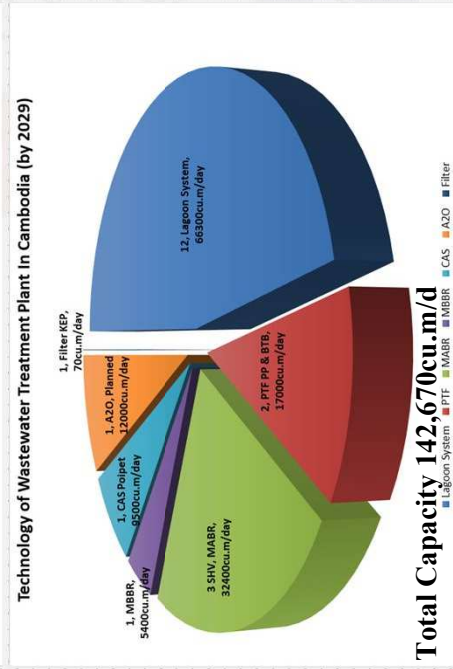
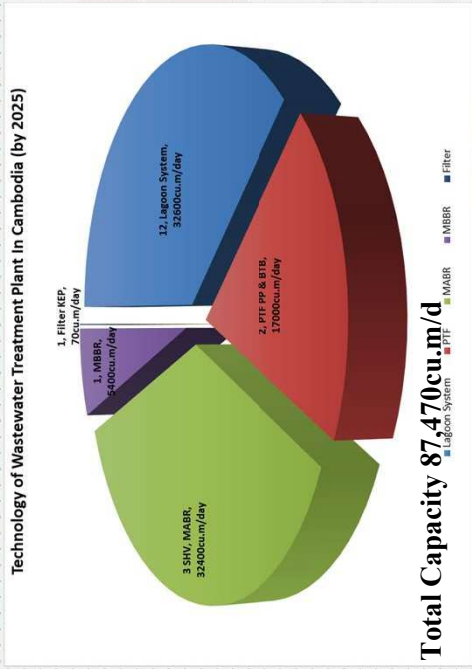
STATUS OF WWTP IN CAMBODIA



UPDATE OF WWTPs IN CAMBODIA				
No.	Provincial Town & Cities	WWTP Capacity (m3/day)	Remark	
A	Completed Project	87,470		
1	Phnom Penh	5,000	JICA -	In operation
2(1)	Sihanoukville	6,900	ADB-	In Operation
2(2)	Sihanoukville	32,400	3 WWTP by RGF	
3	Siem Reap	8,000	ADB-	In Operation
4	kampot	3,300	ADB-	In Operation
5	Steung Sen, Kampong Thom	3,500	ADB-	In Operation
6	Pusat	2,400	ADB-	In Operation
7	Kep	70	ADB-	In Operation
8	Battambang (East & West)	20,500	ADB-	In Operation
9	Kampong Chhang	5,400	ADB-	In Operation
B	Ongoing Project	28,800		
1	Serei Sorphorn-Banteay Meanchey	3,500	ADB-Consturction Stage	
2	Kampong Cham	5,000	ADB-Consturction Stage	
3	Steung Treng	2,900	ADB-Consturction Stage	
4	Takmao, Kandal	12,000	EDCF-Consturction Stage	
5	Bavet-Svay Rieng	5,400	ADB-Consturction Stage	
C	Planned Project	26,400		
1	Kratie	4,900	ADB-Bidding Stage	
2	Poipet-Banteay Meanchey	9,500	ADB-Bidding Stage	
3	Kampong Speu	12,000	China - BUCG	



VARIOUS TECHNOLOGIES OF WWTP IN CAMBODIA





Topic 3: Review of AWaP Partner Countries' Achievements

Review 1: Target achievement status for SDG 6.3

Country : Indonesia

Theme	Contents			
Please report your status of wastewater treatment development between 2015 and 2025. Your report is based on the wastewater coverage rate.	Sewerage Service Coverage	2015	To be confirmed	2025
	Definition used by Indonesia: households using a private water-seal toilet connected either to a septic tank desludged at least once within the last five years or to a domestic wastewater treatment system.			
Please evaluate your prospect for achieving SDG 6.3 in 2030 across the following three steps. A. Achieve B. Almost achieve C. Other than the above	Evaluation of the target achievement in 2030 C. Other than the above			
	Indonesia is progressing, but acceleration is needed to expand safely managed services, reduce underutilized assets, and strengthen local O&M. National direction: 30% safely managed sanitation access by 2029.			



Topic 3 : Review of AWaP partner countries' achievements

Review 2: Outcomes through activities regarding the following items since the establishment of AWaP in 2018

Country : Indonesia

Theme	Contents
Low priority of wastewater management	Initiatives: Wastewater management has been mainstreamed in the 2025–2029 national development agenda through safe, sustainable, and climate-resilient sanitation based on CWIS. Outcomes: The national performance indicator now tracks households with access to safely managed sanitation; 2025 achievement reached 10.29%.
Lack of knowledge and information	Initiatives: Planning support, readiness verification, technical standards, operator capacity strengthening, and monitoring of wastewater facilities have been expanded. Outcomes: 317 provinces/cities/regencies have updated sanitation planning documents; 24 cities/regencies implement LLTT (regular desludging); 196 cities/regencies have functioning FSTPs.
Lack of budget and appropriate technology	Initiatives: Financing is being diversified through APBD, DAK, national-budget stimulus, PPP/KPBU, tariffs/retribution, and performance-oriented investment readiness. Outcomes: Investment planning now links infrastructure delivery with operators, O&M budget, tariff framework, service uptake, and asset utilization.



Topic 3: Review of AWaP partner countries' achievements

Review 3

What should your country do to enhance future wastewater treatment facilities?

Country : Indonesia

Items	Current Challenges and Actions to be Taken
Low priority of wastewater management	Challenge: sanitation has not yet become a consistent local budget and service priority; many assets remain underutilized after construction. Action: link new investment to readiness criteria, local regulations, operators, O&M budget, tariff/retribution, and service uptake commitments.
Lack of knowledge and information	Challenge: fragmented data, uneven operator competency, and planning documents that are not always used for budgeting. Action: strengthen integrated sanitation data and M&E, update SSK, expand LLTT technical assistance, and certify operators.
Lack of budget and appropriate technology	Challenge: high investment needs, low local O&M allocation, and limited use of fit-for-purpose technology. Action: optimize existing FSTP/WWTP capacity, promote PPP/alternative financing, and apply technologies suited to local density and O&M capacity.

Topic 3: Review of AWaP partner countries’ achievements



Review 1: Target achievement status for SDG 6.3

Country : Japan

Theme	Contents			
Please report your status of wastewater treatment development between 2015 and 2025. Your report is based on the wastewater coverage rate.	Sewerage Service Coverage	2015	89.9%	2025
	93.7%(2024)			
Please evaluate your prospect for achieving SDG 6.3 in 2030 across the following three steps. A. Achieve B. Almost achieve C. Other than the above	Your definition of wastewater coverage rate			
	This indicator indicates the diffusion rate of wastewater treatment facilities. The indicator is calculated by dividing the total number of people using wastewater treatment facilities such as sewage systems, rural community sewerage facilities, and johkasou by the total population, and expressing the result as a percentage.			
	Evaluation of the target achievement in 2030			
	B			

Topic 3: Review of AWaP partner countries' achievements



Review 2: Outcomes through activities regarding the following items since the establishment of AWaP in 2018

Country : Japan

Theme	Contents
Low priority of wastewater management	• Kumamoto Water Initiative" Announced at the 4th APWS (Asia-Pacific Water Summit) (2022) • PR of sewerage systems through videos and posters, including Sewerage Day on September 10 • Creative manhole covers with regional designs: Local governments installed original manhole covers reflect the unique traits of the area, fostering a sense of pride among citizens regarding their sewerage. Also, local governments published and distributed manhole collection cards featuring creative manhole covers.
Lack of knowledge and information	• Develop and disseminate guidelines on stock management methods utilizing databases of maintenance and management information.
Lack of budget and appropriate technology	• To strengthen the financial foundation of the sewerage utility, the national government encouraged utilities to revise their user fees, resulting in an increase in the cost recovery rate—the proportion of sewage treatment costs covered by user fees. • Initiatives on Pipe Jacking Methods in AWaP partner Countries

Topic 3: Review of AWaP partner countries' achievements



Review 3

What should your country do to enhance future wastewater treatment facilities?

Items	Current Challenges and Actions to be Taken
Low priority of wastewater management	While the construction of wastewater facilities is largely complete, it will be necessary to implement various projects to ensure that these facilities continue to operate effectively. We will strengthen our public awareness campaigns to help the public understand the importance of these projects.
Lack of knowledge and information	- Passing on technical expertise and promoting public-private partnerships to address staff shortages - Sharing Best Practices and Technical Information (Publication of the DX Catalog and Promotion of Its Utilization)
Lack of budget and appropriate technology	- By accelerating the research, development, and practical application of new technologies, we will achieve the creation of a low-carbon, circular society in the sewerage sector, reduce life-cycle costs, and implement measures to address flooding and infrastructure aging. - To ensure the sustainable provision of sewer services into the future, we will leverage digital technology to advance and efficiency maintenance (such as using drones for pipe inspections).

Topic 3: Review of AWaP's Achievements by Partner Countries



Review 1: Target achievement status for SDG 6.3

Country **PHILIPPINES**

Theme	Contents			
Please report your status of wastewater treatment development between 2015 and 2025. Your report is based on the wastewater coverage rate.	Estimated Coverage of Septage Management Programs	2015		2025
		Total Population within Franchise Area (2015 Population)		Percentage of the Population (2015) within Areas with a Septage Management Program
		Mega Manila		14.7%
		Outside Mega Manila		3.0%
	Total		17.8%	
	Estimated Coverage of Sewerage System Services	2015		2025
		Total Population within Franchise Area (2015 Population)		Percentage of the of Population (2015) within Areas with a Sewerage System Services
		Mega Manila		12.8%
		Outside Mega Manila		0.1%
	Total		12.9%	

Please evaluate your prospect for achieving SDG 6.3 in 2030 across the following three steps.

- A. Achieve
- B. Almost achieve
- C. Other than the above

Evaluation of the target achievement in 2030

The 2015 baseline is based on the Philippine Water Supply and Sanitation Master Plan (PWSSMP). As of 2025, an official nationwide wastewater coverage estimate using the same methodology has not yet been published. Wastewater infrastructure has continued to expand through MWSS concessionaires, LGUs, and the National Sewerage and Septage Management Program (NSSMP), but a consolidated national coverage figure is still under development.

Topic 3 : Review of AWaP partner countries' achievements



Review 2: Outcomes through activities regarding the following items since the establishment of AWaP in 2018

Country **PHILIPPINES**

Theme	Activities
Low priority of wastewater management	- Continued implementation of the National Sewerage and Septage Management Program (NSSMP) to support LGUs in developing sewerage and septage infrastructure. - Revision of the NSSMP Program Operations Manual (POM) to align with updated financing policies and institutional arrangements. - Adoption of the Unified Resource Allocation Framework for Water Supply and Sanitation (URAF-WSS) to improve prioritization of wastewater investments. - Continued expansion of sewerage systems by MWSS, Manila Water, and Maynilad, increasing wastewater treatment capacity in Metro Manila.
Lack of knowledge and information	- Conducted technical trainings, orientations, and capacity-building activities LGUs, and Water Service Providers under the NSSMP. - Prepared feasibility studies for priority LGUs to support wastewater infrastructure development. - Participated in AWaP, JICA Technical Cooperation, and other international knowledge-sharing activities to exchange best practices on wastewater management. - Developed monitoring tools and strengthened data collection to support wastewater planning and implementation.
Lack of budget and appropriate technology	- Continued implementation of the NSSMP financial assistance program for eligible LGUs and Water Service Providers. - Promoted financing through Official Development Assistance (ODA), Public-Private Partnerships (PPP), and national government support. - Expanded application of fit-for-purpose technologies, including centralized sewerage systems for highly urbanized areas and decentralized wastewater or septage management systems for smaller or remote communities. - Ongoing development of updated technical guidelines and planning tools to improve project implementation and long-term sustainability.



Review 3 What should your country do to enhance future wastewater treatment facilities?

Items	Current Challenges and Actions to be Taken
Low priority of wastewater management	• Wastewater management continues to receive lower priority than water supply, resulting in limited investments and low sewerage coverage in many LGUs. • Strengthen policy advocacy and mainstream wastewater management into national and local development plans. • Accelerate implementation of the revised NSSMP Program Operations Manual (POM) and strengthen inter-agency coordination to increase LGU participation and investments.
Lack of knowledge and information	• Many LGUs and Water Service Providers still have limited technical capacity in wastewater planning, design, operation, and asset management. • Continue capacity-building programs, technical assistance, and preparation of feasibility studies. • Strengthen wastewater monitoring systems, data management, and knowledge sharing.
Lack of budget and appropriate technology	• High capital and operation costs remain major barriers to implementing sewerage projects, particularly for smaller LGUs. • Expand financing through NSSMP, URAF-WSS, Official Development Assistance (ODA), and Public-Private Partnerships (PPP). • Promote fit-for-purpose technologies, including centralized sewerage systems for highly urbanized areas and decentralized wastewater or septage management systems where conventional sewerage is not feasible.

Topic 3: Review of AWaP's Achievements by Partner Countries



Review 1: Target achievement status for SDG 6.3

Country : Vietnam

Theme	Contents			
Please report your status of wastewater treatment development between 2015 and 2025. Your report is based on the wastewater coverage rate.	Sewerage Service Coverage	2015	About 50%	About 80%
	Your definition of wastewater coverage rate: This refers to the service area of the urban drainage system within the service coverage area.			
Please evaluate your prospect for achieving SDG 6.3 in 2030 across the following three steps. A. Achieve B. Almost achieve C. Other than the above	Evaluation of the target achievement in 2030 B This index reflects the rate of spread of utilities providing drainage and wastewater treatment service.			

Topic 3 : Review of AWaP partner countries' achievements



Review 2: Outcomes through activities regarding the following items since the establishment of AWaP in 2018

- ◆ Low priority of wastewater management
 - Initiatives for mainstreaming and their outcomes.
- ◆ Lack of knowledge and information
 - Activities, including human resource development, monitoring the development of wastewater treatment facilities, and researching wastewater management systems in other countries
- ◆ Lack of budget and appropriate technology
 - Fiscal systems, initiatives regarding user fees, and the development of technical standards, etc.

Country : Vietnam

Theme	Contents
Low priority of wastewater management	- Technical cooperation projects between the Ministry of Construction of Vietnam and MLIT of Japan, and between Vietnamese and Japanese local governments such as: Hanoi – Yokohama, Hai Phong – Kitakyushu, Can Tho – Osaka, etc. - Investment projects for the construction of flood control works in major cities such as Hanoi, Ho Chi Minh City, Hai Phong...
Lack of knowledge and information	- Promulgation of National Technical Regulation(QCVN01:2026 on Urban and Rural Planning, including rainwater drainage and ground elevation planning, and wastewater drainage planning. - Revision of National Technical Regulation QCVN07:2016 on Technical Infrastructure Works, including drainage and wastewater treatment works.
Lack of budget and appropriate technology	- Promote the shift from collecting drainage fee to collecting drainage service price in localities.

Topic 3: Review of AWaP partner countries' achievements



Review 3

What should your country do to enhance future wastewater treatment facilities?

Country : Vietnam

Items	Current Challenges and Actions to be Taken
Low priority of wastewater management	Continue to implement and expand technical cooperation projects between the Ministry of Construction of Vietnam and MLIT of Japan, between Vietnamese localities and Japanese localities such as Hanoi - Yokohama, Hai Phong - Kitakyushu, Can Tho - Osaka... as well as with other countries and organizations around the world to maximize resources.
Lack of knowledge and information	Complete the necessary regulations and standards for drainage and wastewater treatment facilities that are suitable for smart cities and adaptable to climate change.
Lack of budget and appropriate technology	Accelerate the implementation of sewerage service price collection and roadmap in line with clean water prices in localities.



Topic 4

Future schedule

Topic4: Future schedule

According to the AWaP Implementation Guidelines, the place, the time and others of the General Meeting shall be decided through discussion of the operations committee.

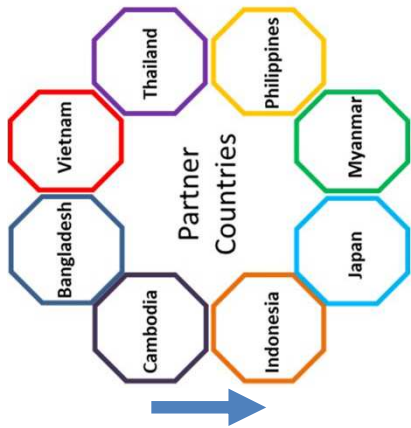
From Asia Wastewater Management Partnership Implementation Guidelines

5.2.3 General Meetings

General meetings shall be held once in every two years in principle. The place, the time and others of the meeting shall be decided through discussion of the operations committee.

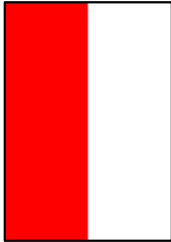
From Chair's Summary of the Fourth AWaP General Meeting

- 15. The proposal for the next General Meeting and Operations Committee was presented. The Fifth General Meeting is proposed to take place from August to October 2027 in Indonesia.



This is future schedule this and coming year.

Year	Month	memo
2026	August	The 6 th Operations Committee in Tokyo
2026	September	Send document regarding this year’s annual report from AWaP
2027	Autumn	The 5 th General Meeting in Indonesia



2026 United Nations Water Conference

The 2026 United Nations Water Conference will bring together global leaders, policymakers, practitioners, and stakeholders to accelerate progress towards the achievement of Sustainable Development Goal 6 (clean water and sanitation) and to strengthen coordinated action across the global water agenda.

- **Date: 8 - 10 December 2026**
- **Place: Abu Dhabi, the United Arab Emirates(UAE)**
- **Co-hosted: UAE and Senegal**

Interactive Dialogues		Co-Chair
A	Water for People: The human rights to water and sanitation, including for those in vulnerable situations, for healthy societies and economies	Switzerland
B	Water for Prosperity: Valuing water, Water-Energy-Food nexus, advancing integrated and sustainable water resource management, wastewater and water-use efficiency across sectors, and economic and social development	Ghana
C	Water for Planet: Climate, Biodiversity, Desertification, Environment, Source to Sea, Resilience, Disaster Risk Reduction	Spain
D	Water for Cooperation: Transboundary and International Water Cooperation, including Scientific Cooperation, and inclusive governance	China
E	Water in Multilateral Processes: SDG 6, the 2030 Agenda and beyond, and global water initiatives	Japan
F	Investments for Water: Financing, technology & innovation, and capacity building	Egypt
		Finland
		Zambia
		Germany
		Mexico
		France
		South Africa

Document Appendix

Activities based on 2nd Work Plan

The 2nd Work Plan for 2030



Activities	2023	2024	2025	2026	2027	2028	2029	2030
Schedule	General Meeting	Operations committee						

3. Resolving Common Challenges

3.1 Mainstreaming wastewater management	Setting and sharing AWaP policy regarding mainstreaming and financing Organizing regional issues, especially finance of sewerage projects Consensus formation for AWaP policy Follow-up the activities implemented by each partner country							
3.2 Promote Centralized and Decentralized wastewater treatment systems	Setting AWaP policy for optimum wastewater treatment systems Consensus building for centralized and decentralized wastewater treatment systems Survey and share early solutions (Quick Project) for wastewater system improvement in undeveloped areas Follow-up of the activities implemented by each partner country							
3.3 Trenchless sewer construction	Formulating the draft guidelines in the Philippines Continuous development of national technical standards for the pipe-jacking method by involved countries HRD through technical seminars or on-site training							
3.4 Sharing and discussing sewerage technologies and case studies adapted to local conditions	Collection of technologies and case studies by countries Discussion on challenges beyond the SDGs 6.3							
3.5 Sharing and discussing common challenges	(Discussing issues as they arise)							

Initiatives on Pipe Jacking Methods in Each Country



Cambodia

MLIT prepared a Draft Standards (1st Edition) and provided it to MPWT in March 2023. MPWT and MLIT are currently being translated the Draft Standards into Khmer.



Discussion at the 6th bilateral meeting (Jul. 2024)



Philippines

MLIT prepared a Draft Standards (1st Edition) and provided it to DPWH in March 2024. DPWH and MLIT are discussing standardization.



Technical Seminar on Pipe Jacking Methods in the Philippines (Oct. 2024)



Indonesia

Toward the formulation of a Draft standards(1st Edition), MLIT coordinated with Institut Teknologi Bandung on the content of the draft prepared in 2022. MLIT handed over the Draft Standards, translated into Indonesian, to PU in December 2025.



Handed over the Draft Standards(Dec. 2025)



Vietnam

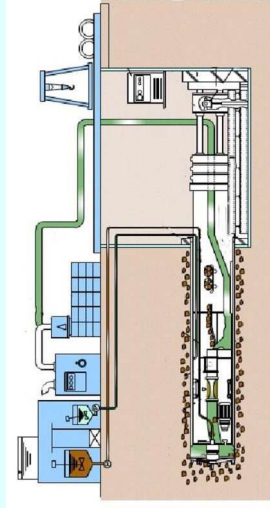
MOC and MLIT formulated a Draft Standards (1st Edition) in March 2014.
MOC and MLIT formulated a Draft Standard (7th Edition) in FY 2023.

Some contents in the Standard have been converted to TCVN (Vietnam National Standards)



Discussion at the 18th bilateral meeting (Jan.2026)

Pipe Jacking Methods



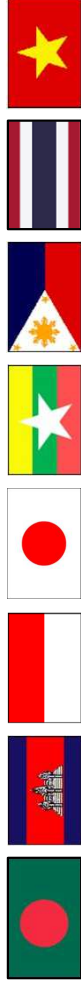
Japan



Design and estimation standards for Pipe Jacking Methods were established in 1988.

Since then, revisions have been continuously made every few years, taking into account the latest technological trends and actual conditions.

The 2nd Work Plan for 2030



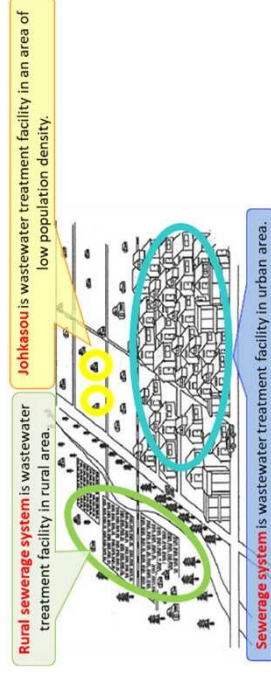
Activities	2023	2024	2025	2026	2027	2028	2029	2030
Schedule	General Meeting	Operations committee						

3. Resolving Common Challenges

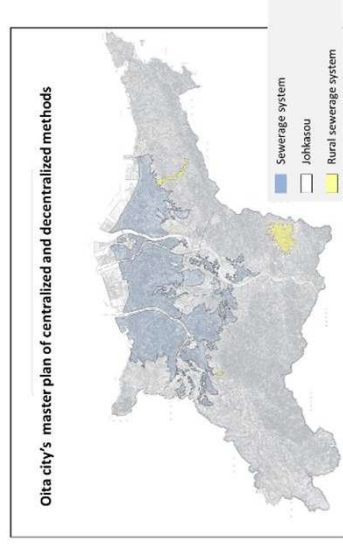
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3.3 Trenchless sewer construction	Formulating the draft guidelines in the Philippines Continuous development of national technical standards for the pipe-jacking method by involved countries HRD through technical seminars or on-site training							
3.4 Sharing and discussing sewerage technologies and case studies adapted to local conditions	Collection of technologies and case studies by countries Discussion on challenges beyond the SDGs 6.3							
3.5 Sharing and discussing common challenges	(Discussing issues as they arise)							

Case study		Master plan of centralized and decentralized methods				
Theme	Plan	Pipe	Treatment	Sludge	Management	Renewal
Subject	Optimal combination					

- To efficiently disseminate wastewater treatment facilities, local governments formulate a "prefectural concept plan" for selecting efficient and appropriate diffusion methods by the characteristics of various wastewater treatment facilities, their economic efficiency, and social condition changes.
- In the prefectural concept, the selection of wastewater treatment systems (decentralized or centralized) will be determined by comparing LLCs, while also considering regional characteristics.



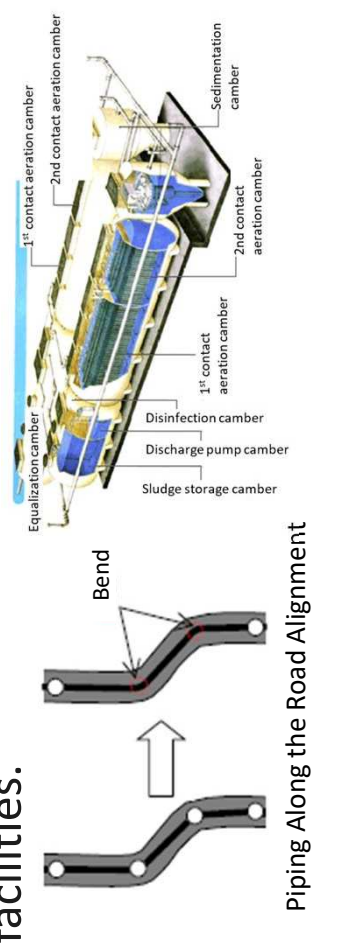
- The plan is being developed throughout the country under the leadership of the prefectural government. Sewerage project is carried out based on this plan, so investment in project is efficient and not duplicated.
- Since the plan is based on a unified scientific method, citizens are more likely to be convinced if either decentralized or centralized treatment is designated as the range of treatment.



Note:

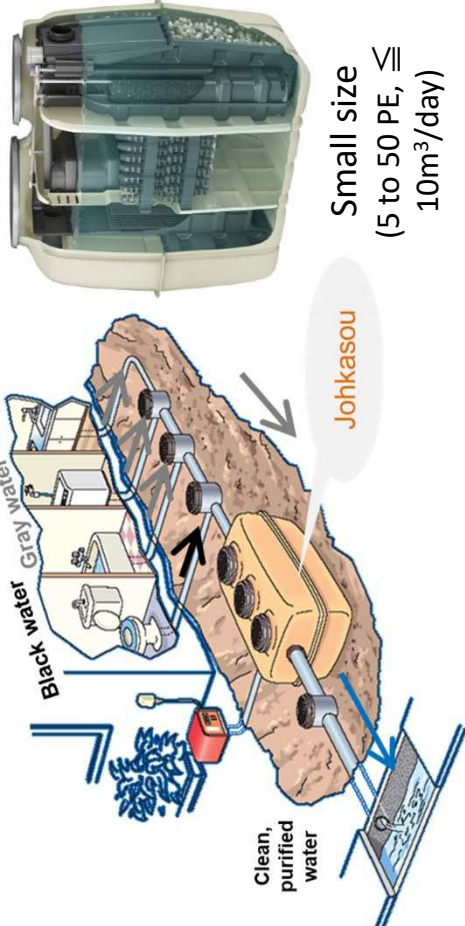
Japan

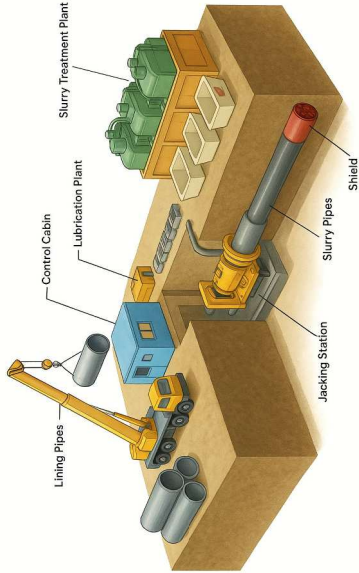
Collection of technologies and examples by countries

Technology	Quick-project				
Theme	Plan	Pipe	Treatment	Sludge	Management
Subject		Efficient construction			
Many local governments in Japan are facing social changes, such as financial difficulties due to population decline. To address these pressing issues, MLIT has implemented a new sewerage development approach since 2017. This approach includes the demonstration of new technologies for prompt and cost-effective wastewater projects, allowing for the evaluation of their effectiveness and providing recommendations for adoption.			After assessing five sewer-laying technologies and three wastewater treatment methods, guidelines for their adoption have been published. Of these, sewer construction technology, along with road designs, has been implemented by 181 municipalities. Additionally, four municipalities have adopted prefabricated ultra-small-scale wastewater treatment facilities.		
			 The diagram illustrates a prefabricated ultra-small-scale wastewater treatment facility. It shows a cross-section of the facility with several chambers: Equalization chamber, 1st contact aeration chamber, 2nd contact aeration chamber, Disinfection chamber, Discharge pump chamber, Sludge storage chamber, 1st contact aeration chamber, 2nd contact aeration chamber, and Sedimentation chamber. Below the cross-section, a piping alignment is shown, including a bend and a straight section, with the text 'Piping Along the Road Alignment'.		

Note:

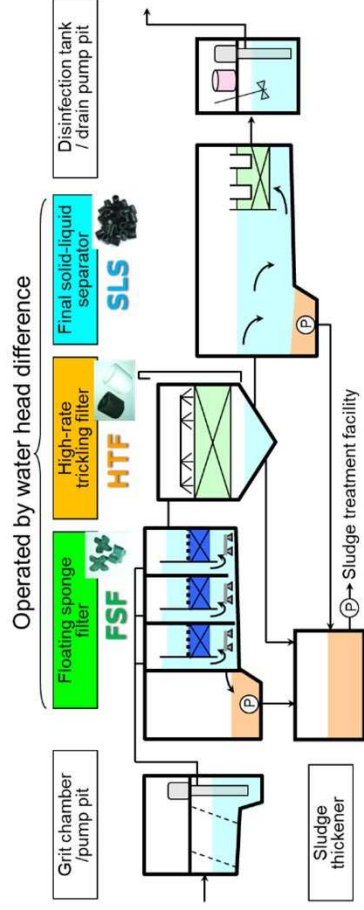
Japan

Technology		Johkasou				
Theme	Plan	Pipe	Treatment	Sludge	Management	Renewal
Subject			Efficient construction			
- Johkasou is a decentralized wastewater treatment system that can treat not only night soil but also other gray water including kitchen/laundry wastewater. - Johkasou can be installed in individual houses and buildings.			- Johkasou shows the same level of treatment performance as the sewerage system. - Since water treated in Johkasou can be directly discharged to drains and rivers, sound water cycle and river water quantity are ensured in the region. - Johkasou can start servicing at a low cost and in a short period of time. - The number of Johkasou units installed outside of Japan has been increasing (over 74,000 units as of the end of 2025). - Installation of Johkasou will contribute to improving the water and hygienic in urban, suburban and rural areas.			
			Note:			
						Japan

Technology		Pipe-jacking method				
Theme	Plan	Pipe	Treatment	Sludge	Management	Renewal
Subject		Construction method				
• Pipe jacking is a trenchless construction method used to install underground pipelines without the need for long-trench excavation. • It is particularly effective in urban areas and under busy roads where open-cut construction is difficult. • Various jacking techniques, including curve jacking, can be applied depending on the ground conditions and project requirements.		 • Minimizes impact on surface traffic, allowing construction while maintaining urban functions. • Causes little impact on existing underground infrastructure and buildings. • Shortens construction period, especially for deep sewers installation. • Improves safety and reduce social costs. • Increasingly adopted overseas as an efficient and less disruptive method for urban infrastructure development.				

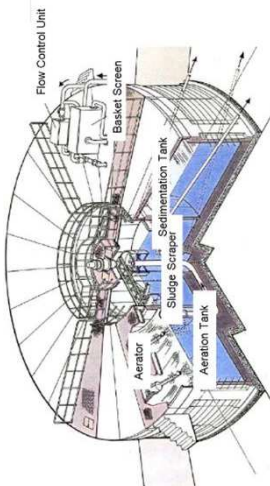
Note:		Japan
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Technology	PTF (Pre-treated Trickling Filter System)				
Theme	Plan	Pipe	Treatment	Sludge	Management
Subject			Stabilization/Energy saving		
- The PTF process consists of three steps. - Remove SS and solid BOD by filtration - Remove soluble BOD by biofilter on the surface of the carrier. - Remove SS slough off from the carrier by sedimentation and filtration - The PTF process does not require aeration and is based on the water head difference.			- The following performance has been confirmed through demonstration tests in Danang City, Vietnam. - Treatment performance The BOD and SS concentrations of the treated water must satisfy the following values. BOD: 30 mg/L or less SS: 30 mg/L or less - Electricity consumption per unit The electricity consumption per unit inflow volume required for water treatment must be 0.1 kWh/m³ or less. - This system has been introduced to the wastewater treatment facilities in Hai Phong City, Vietnam, and Phnom Penh, Cambodia.		



Note:

Japan

Prefabricated Oxidation Ditch(POD)						
Technology						
Theme	Plan	Pipe	Treatment	Sludge	Management	Renewal
Subject						
- POD is a packaged system consisting of reaction tank (activated sludge treatment) and final sedimentation tank. - Standard design are made for every 100m³/d from 300m³/d to 1,200m³/d - The main structure is made of factory-made prefabricated reinforced concrete members.				- The system is also highly reliable as a processing system. - Saves design labor and construction period by packaged system - Stable treatment of T-N and T-P - Easy maintenance - In Japan, the system has already been installed in approximately 200 locations. - Good treatment performance has been verified through demonstration tests in Cambodia.		
						
Note:				Japan		

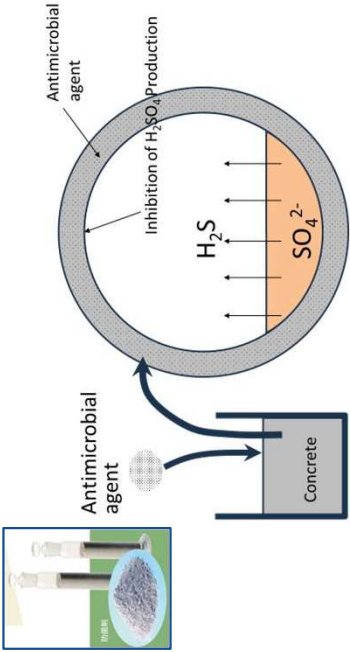
Collection of technologies and examples by countries

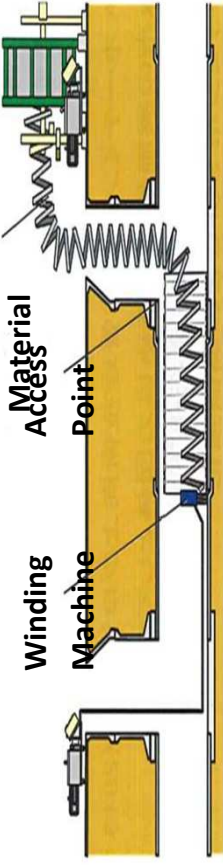
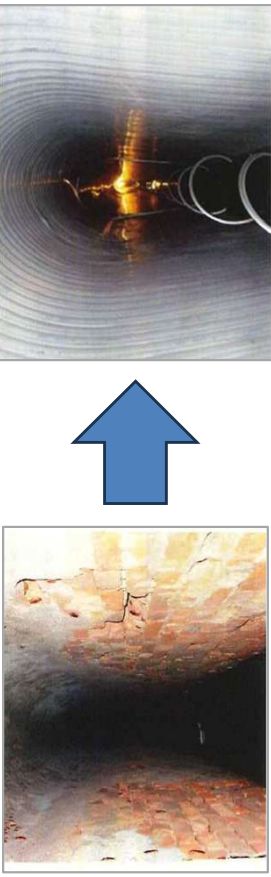
Technology		Chain Type Screen Unit				
Theme	Plan	Pipe	Treatment	Sludge	Management	Renewal
Subject			Screen			

Selecting a Screen unsuitable for combined sewer systems has caused equipments failures and dysfunction in the wastewater treatment facility.  Continuous Belt Type  Wire Rope Type <i>Pump clogging</i> <i>Sand & Debris accumulation</i> Selection of a suitable screen model for a combined sewer is important ➔ Chain Type Screen Unit was selected as the demonstration device	■ Suitable for combined sewer systems: Equipped with a Large Object Avoidance Mechanism and resistant to sand inflow. ■ Unit Structure: Easy installation, reducing construction time and cost. ■ Easy Maintenance: Simple structure minimizes malfunctions and simplifie maintenance. ■ Improved Corrosion Resistance: Constructed of SUS304 stainless steel and resin for excellent corrosion resistance. ■ Units installed: 56 (As of Dec. 2025) 
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Note:	Demonstrated in Thailand as part of the WOW to Japan Project	Japan
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Corrosion-resistant concrete products						
Technology						
Theme	Plan	Pipe	Treatment	Sludge	Management	Renewal
Subject		corrosion				

- Corrosion-resistant concrete is concrete mixed with an antibacterial agent. - An antibacterial agent is a substance that inhibits the activity of sulfur-oxidizing bacteria, which convert hydrogen sulfide—a cause of concrete corrosion—into sulfuric acid. - By properly mixing this antibacterial agent into the concrete, it is possible to prevent sulfate degradation of concrete used in sewer facilities either before it occurs or in its early stages.	   				
- Corrosion protection is maintained Because the antibacterial agent is evenly distributed throughout the entire interior of the concrete product, corrosion protection is maintained even when wear occurs in the section exposed to sewer flow, unlike in coated products. - Life extension measure. When corrosion protection is required, compared to lining Hume pipe construction cost reduction of more than 50% including construction cost					

Technology		The Sewer Pipe Rehabilitation method for Non-circular shape				
Theme	Plan	Pipe	Treatment	Sludge	Management	Renewal
Subject						Pipe Rehabilitation
- Increased traffic volume resulting from economic development and urbanization has led to chronic traffic congestion. Furthermore, due to a lack of information on underground infrastructure, it is difficult to pinpoint the locations of pipes; as a result, replacing sewer pipes through open-cut construction involves significant traffic restrictions and survey burdens, making it difficult to carry out such work in the city center. - Sewer pipe rehabilitation method is a trenchless technology used to restore the structural integrity and hydraulic performance of aging or damaged sewer pipes without excavation. This method is widely applied to address problems, which can become losing reliability and service life of underground sewer pipe as infrastructure.		 ① Minimizing the impact of social activities like traffic jams during construction because of no excavation of public spaces ② Any time work to be interrupted and restarted with live flow in the pipe ③ Improving flow capacity after the rehabilitation because of smooth surface of PVC rehabilitation pipe ④ Available to be rehabilitated any shapes (Rectangle, Box, Egg, etc.) 				

Note: Demonstrated in Viet Nam as part of the WOW to Japan Project

Japan



**The 6th Operations Committee of
Asia Wastewater Management Partnership**

August 5, 2026