## Ministry of Construction of Vietnam Administration of Technical Infrastructure

For 4th Asia Pacific Water Summit, Parallel thematic session

## Policy and future challenges in the field of Sewerage in Vietnam

Assoc. Professor/Dr. Mai Thị Liên Hương
Director General,
Administration of Technical Infrastructure
Ministry of Construction

**April 23, 2022** 

## Overview of legal framework in drainage/sewerage in Vietnam

The Government of Vietnam is prioritizing drainage/sewerage and urban flood control by establishing a legal framework, technical standards and national orientation.

- 1. Law on Planning
- 2. Law on Construction
- 3. Law on Environmental Protection
- 4. Law on Urban Planning
- 5. Law on water resources

Decree 80/2014/ND-CP on drainage and wastewater treatment

- 1. Circular No.04/2015/TT-BXD guiding the implementation of Decree 80
- 2. Circular No.13/2018/TT-BXD guiding methodology for drainage service pricing
- 3. Circular No.15/2021/TT-BXD Guiding the implementation of Law on Environmental Protection relating wastewater collection and drainage works

Local regulations on drainage and sewerage management

- > Technical standards and regulations, technical-economic cost norms
- Adjusted Orientation for drainage development in Vietnam urban and industrial areas to 2025 with the vision towards 2050.

# Objectives of the Orientation for Urban Drainage Development in Vietnam

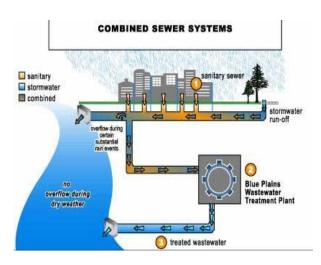
- Adjusted Orientation for Drainage Development in Vietnam urban and industrial areas to 2025 with the vision towards 2050 (approved by the Prime Minister at the Decision No. 589/QD-TTg dated 06 April 2016)
- More investment is necessary to achieve this national orientation.

Targets	2020	2025	2050
Coverage rate of urban drainage system service	over 70%	Over 80%	100%
Rate of wastewater collected and treated in urban areas	15-20%	20-50%	100%
Rate of wastewater collected and treated in hospitals and urban areas	100%	100%	100%
Rate of wastewater collected and treated in craft villages	30-50%	Over 80%	100%

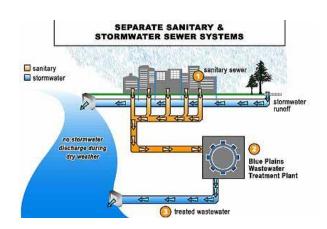
## **Overview of Drainage systems in Vietnam**

- The average rate of wastewater connection and collection of drainage systems covers 64%. The rate of pipelines per capita is still low compared to other cities in the world (average less than 0.5m/person compared to 2m/person in the world).
- Up to now, the rate of wastewater collection and treatment has only reached about 15%. Across the country, there are about 71 centralized wastewater treatment plants under operation with a total designed capacity of about 1.38 m3/day.
- The drainage systems in large urban cities and river basins are still mainly combined.
- The Ministry of Construction has issued the Circular No.15/2021/TT-BXD, requiring new urban centers and residential areas to build separate wastewater collection and treatment systems for connection, collection and transport wastewater to meet the requirements of environmental protection, to improve the operating efficiency of the drainage systems and to reduce wastewater pollution.

#### Combined drainage system



#### Promoting separate drainage system



#### **Finance**

- In order to develop sustainable sewerage works in Vietnam, it is essential to set appropriate service price in each local government.
- "Drainage Service Price" which is stipulated in Decree 80 (2014) is gradually replacing "Environmental protection fee" to realizing "Polluters pay principle" and "Full cost recovery."
- For example, drainage service price in Ho Chi Minh City will increase up to 30% of drinking water price in 2025.
- Application of Drainage Service Price is expected to improve financial conditions of sewerage management in local governments.

Example: Drainage Service Price in Ho Chi Minh City

Item	2022	2023	2024	2025
Average Drinking Water Price Vietnamese Dong/m <sup>3</sup> (USD/m <sup>3</sup> )	9,590	10,165	10,775	11,422
	(0.42)	(0.44)	(0.47)	(0.50)
Drainage Service Price/Drinking Water Price	15%	20%	25%	30%
Average Drainage Service Price Vietnamese Dong/m <sup>3</sup> (USD/m <sup>3</sup> )	1,439	2,033	2,694	3,426
	(0.06)	(0.09)	(0.12)	(0.15)

# Study on construction and application of pilot drainage model in Mekong Delta Region of Vietnam









CÀ MAU CITY

LONG XUYÊN CITY

RẠCH GIÁ CITY

- Built 03 pilot models of sustainable water systems (SUDS) in 03 cities: Ca Mau, Long Xuyen, Rach Gia and the roadmap of sewerage service tariff. The set targets have been achieved with practical results.
- Prioritizing the investment in construction of urban drainage and wastewater treatment projects towards the sustainable development in the context of climate change and sea level rise.
- Studying and proposing the development of the Law on Water Supply and Sewerage under the legislative program; reviewing, revising and supplementing legal documents on sewerage sector.

### **Science and Technology**

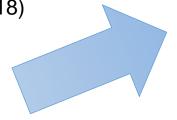
### - Installing new technology through the international cooperation-

- Pipe jacking is a trenchless technology of new pipe installation, and effective method for heavy traffic area, deep underground and so on.
- To utilize pipe jacking technology in Vietnam, Japan and Vietnam have been jointly working to make the technical standards of pipe jacking, as well as conducting training course for many years.
- As a result of continuous work of both countries, now pipe jacking is utilized in sewerage construction projects in Hanoi, Ho Chi Minh City etc.



Making technical standards (2018)







Yen Xa Sewerage construction project in Hanoi (2021)

Training course for engineers