



Viet Nam Urban Environment Program

CASE STUDY

City Sanitation Strategies in the Mekong Delta

ADB



Drainage canal in Ben Tre City

Viet Nam has made great strides in recent years in increasing access to improved sanitation. The country is also investing about \$150 million per year in wastewater management. However, with the rapid growth of cities, Viet Nam needs to triple that investment in order to clean up urban environmental pollution from domestic waste. Says Nguyen Tuong Van, director of the Management Board of Technical Infrastructure Development Projects, Ministry of Construction:

“The demand for investment in drainage and wastewater treatment in Viet Nam is huge. To meet this demand, we hope to obtain financing from international donors, such as the Asian Development Bank, the World Bank, and bilateral donors.”

The Asian Development Bank (ADB) is discussing with the Ministry of Construction and other donors the creation of an urban environment investment program that would close Viet Nam’s sanitation financing gap, according to Hubert Jenny, principal urban development specialist. ADB is already helping 10 cities in the Mekong Delta and Dong Nai River Basin to plan for investments in wastewater management through its City Sanitation Strategies (CSS) Program.

Life in the Mekong Delta region of Viet Nam is defined by water. The delta is critical to the country’s economy and

food security of the people. Half of the nation’s food is grown here. Fertile paddy fields and shrimp farms produce for export as well as the domestic market.

The population of the Mekong Delta region is 17 million and growing; cities and towns are expanding. With rapid urbanization, water pollution from domestic and industrial waste has become a serious environmental and public health problem. In cities and towns, gutters and canals are open sewers for untreated fecal waste from septic tanks and hanging latrines. They are also convenient places to dump garbage.

THE WASTEWATER CHALLENGE

Local governments in the Mekong Delta are facing great challenges in wastewater management. The provincial and city governments consider wastewater treatment a high priority. The ADB CSS Program is designed to jump-start the process of preparing for wastewater investments in delta cities.

According to Hoang Vu Cuong, CSS deputy team leader, the program’s objective is to improve public health, and protect the environment and water resources. The focus is on solutions that are affordable and appropriate for conditions in Viet Nam’s small cities:

“Wastewater treatment projects involve large investments and high operation costs. Therefore, it is very important to take into account cost recovery and people’s willingness to pay for wastewater management fees. On the technical aspect, our focus is on cost-effective technologies for wastewater collection and treatment. We should use a combination of centralized and decentralized treatment options.”

Piped sewage systems are very expensive so septic tanks will remain an important part of the sanitation service chain. All sanitation strategies include a septage management component to collect, treat, and safely reuse or dispose of fecal sludge. Says John Block, CSS team leader:

“More attention should be paid to improving on-site systems, such as septic tank design, and household plumbing. There must be better supervision of construction and enforcement of regulations in order to prevent leakage of fecal waste into the environment.”

The CSS Program also considers appropriate solutions for responding to climate change. The low-lying Mekong Delta is highly vulnerable to climate change impacts. Rising sea levels are causing salt intrusion into rivers, which endangers rice crops and sources of freshwater supply, and brings more flooding in urban areas. To be effective, city



Municipal worker cleans gutter clogged with fecal sludge

sanitation strategies must also consider solutions to the related problems of improving drainage and solid waste collection and disposal.

A TYPICAL DELTA CITY

Ben Tre is a typical small city in the Mekong Delta. It has a population of 116,000. Drain pipes pour untreated domestic waste into the network of canals that flow into the Tien Giang River, a tributary of the Mekong. At present, Ben Tre does not have a centralized wastewater collection or treatment system.

In some wards, conditions are especially bad. Gutters are black from toilet waste and clogged with garbage. Most homes have septic tanks but at present the city does not have a septage management program to clean out septic tanks and safely dispose of the sludge. If septic tanks are emptied, the sludge is often dumped into convenient open gutters and drainage canals. Ba Riem, like many residents who live near the canals, complains about the smell and health hazard:

“The canal is so filthy. Everyone around here complains about the foul smell. It was even worse before the government had the canal dredged. But it is still dirty and polluted. In the rainy season, there



House surrounded by black water and garbage



Ben Tre Province government leaders meet with ADB City Sanitation Strategies team

are a lot of mosquitoes going into the house. Small children often get dengue fever. When it rains, the water cannot drain off immediately. The dirty water usually enters the house.”

In December 2014, ADB held a workshop with local government officials and the Ministry of Construction to discuss initial reports on sanitation investment options for several cities, including Ben Tre. Following the workshop, the chair of Ben Tre Province People’s Committee advised the ADB CSS team that the local government is keen to move forward with the program. The next step is to elaborate the technical options and their costs. One option is to combine both centralized and decentralized treatment systems for the city center, along with a robust septage management program for other areas.

Nguyen Truc Lam, vice-chair of the Ben Tre City Government, says that investing in wastewater management is vital to clean up the environment and ensure the sustainable development of Ben Tre in the future:

“If completed, these projects would certainly improve the environment and the quality of life of citizens, both physically and spiritually. Thus, the people of Ben Tre City would like them to be implemented.”

CITY SANITATION STRATEGIES PROGRAM HIGHLIGHTS

Objective

- To improve public health, clean up the environment, and protect water resources

Approach

- Innovative, cost-effective treatment technologies
- Affordable, phased investments
- Wastewater treated before discharge
- Level of treatment related to nature of receiving water
- Centralized or decentralized treatment for high-density urban centers
- Septage management for other areas
- Future increases in energy costs, water shortages, and impacts of climate change taken into account

Funding and Implementation

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- The Ministry of Construction is the executing agency.

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