PROJECT INFORMATION DOCUMENT (PID)
CONCEPT STAGE

Report No.: PIDC501

Project Name	Second Ho Chi Minh City Environmental Sanitation Project (P127978)
Region	EAST ASIA AND PACIFIC
Country	Vietnam
Sector(s)	Wastewater Treatment and Disposal (50%), Wastewater Collection and Transportation (25%), General water, sanitation and flood protect ion sector (25%)
Lending Instrument	Specific Investment Loan
Project ID	P127978
Borrower(s)	Steering Center of Urban Flood Control Program
Implementing Agency	Steering Center of Urban Flood Control Program
Environmental Category	A-Full Assessment
Date PID Prepared	09-Jul-2012
Estimated Date of Appraisal Completion	00000000
Estimated Date of Board Approval	19-Dec-2013
Concept Review Decision	Track II - The review did authorize the preparation to continue

I. Introduction and Context

Country Context

Vietnam's economy is showing progress. The GDP growth in 2011 was 5.9 percent and inflation declined to 14.1 percent in March 2012 from a peak of 23 percent in August 2011. In addition, the current account deficit is estimated to have declined to 0.5 percent of GDP in 2011, from 4.1 percent in 2010, mainly due to a broad-based rebound in exports. The fiscal deficit is estimated to have declined to 2.7 percent of GDP in 2011, down from 5.2 percent in 2010. Driven by the reforms that began in 1986, Vietnam is emerging as a middle-income country. In the span of about 25 years its GNI per capita per year has risen from less than US$100 to over US$1000, living standards have tripled, and the poverty headcount has fallen by 80 percent. As Vietnam rises as a middle income country, the focus will necessarily shift to addressing sustainability, quality, and equity of growth.

An integral part of Vietnam's transition from low to middle income and beyond will depend on how well it manages the transition from a largely rural to urban economy. The country's economic progress has coincided with rapid urbanization, with Vietnam sustaining a 3.4 percent annual urban population growth rate from 1999 to 2009 compared to a rural population growth rate of less than 1 percent. Most of the country's urban and economic growth over the past ten years has been concentrated in Hanoi and Ho Chi Minh City (HCMC) and their economic regions. HCMC in

particular has seen rapid economic and population growth, generating over 20 percent of the country's GDP and 45 percent of the country's manufacturing. The Government of Vietnam (GOV's) 2011-2020 Socio-Economic Development Strategy recognizes that urbanization will be necessary to promote the country's goals of industrialization and modernization. Such rapid urbanization, has created opportunities for growth but it has also resulted in increasing environmental degradation in major urban centers due to increased congestion and pollution.

Sectoral and Institutional Context

The Government is clear on its policy on water and sanitation. It plans to expand coverage to meet the growing demand and this policy is reflected in two Government decisions: Decision No. 1929 (water) and Decision No. 1930 (wastewater and drainage). For the wastewater sector, the goals of the Government and the issues in the sector are elaborated below.

Through the Orientation Plan for Urban Drainage to 2025 and Vision to 2050 (Decision No. 1930/ QD-TTg dated November 20, 2009) the Government intends to: reduce flooding in urban areas and rehabilitate existing drainage systems; expand drainage coverage to 80 percent by 2020; increase coverage of wastewater collection and treatment to 60 percent of the respective populations by 2020 for the cities of classes I to III and to 40 percent by 2020 for the towns of classes IV and V; gradually replace subsidies with user charges; and introduce wastewater treatment.

The institutional arrangements in the sector are also clear. Delivery of water and sanitation services has been decentralized to the provinces, which are responsible for project preparation and implementation. The central government is responsible for policy setting and monitoring progress in meeting sectoral targets.

While the sector policies and institutional arrangements are clear, there are issues that are faced by the sector. To support the urbanization process in a manner that protects the environment and reduces the risks to human health, there is need to improve septic tank management and collect and treat wastewater. In addition, there is need to better manage the water flow in the combined drains that carry both rain water and wastewater since during heavy rain events, polluted water can flood the streets of a city.

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Sector Issues

Septic Tank Management: It is estimated that about 75 percent of the urban population uses septic tanks and water from the septic tanks typically flows into the combined drainage and sewerage system and is ultimately discharged in a water body without treatment. The septic tank usage is not well regulated and the sludge from the septic tanks is often not removed in a timely manner, which reduces the efficiency of treatment and increases the pollution in the water going to the drains. Further, the sludge that is collected from the septic tanks is often deposited in areas without control, creating a threat to the population's health and the environment. Improper functioning of septic tanks also affects the quality of groundwater. A recent study by the HCMC Department of Natural Resources and Environment (DONRE) estimates that 47 percent of groundwater contamination in that city is attributable to leakage from septic tanks.

Wastewater Collection and Treatment: The discharge of untreated water from septic tanks is polluting water bodies and raises environmental and health concerns. It is estimated that less than 10 percent of the wastewater that is being generated today in the country is being treated. In HCMC,

about 7 percent of the wastewater collected is currently being treated. Given the growth in the urban population – by 2020 about 45 million people are expected to live in urban areas in Vietnam – there has been an increase in wastewater generated in the urban areas which has created a need to systematically collect and treat wastewater to prevent the pollution of streams and rivers. It is estimated that currently about 3.9 million m3 of wastewater is generated every day in urban areas, which is about four times the volume of urban wastewater generated in 1990 (Ministry of Construction 2009).

Sewerage and Drainage: In most urban areas, common drains carry storm water and wastewater. In wet weather conditions, these drains can overflow leading to flooding of streets with polluted water. Vietnam has a policy to ultimately separate sewers (that carry wastewater) and drains (that carry storm water) and this policy is being implemented in new development area such as District 2 in HCMC under this project. However, for existing urban areas that have combined drains, separating the systems would take time and will be expensive. For such areas, proper drainage management strategies should be in place to prevent flooding with wastewater.

Investments

The investment costs are high and there is a need to establish priorities as the country embarks on a program to improve sanitation practices. The costs of meeting the wastewater collection and treatment goals, as outlined in Decision 1930, are estimated to be US$10.8 billion to 2025. This would require an estimated annual capital investment between 2010-2025 of around US$700 million, which is ten times the historical annual investments in the sector from 1995-2010. Up to now the sector has been nearly completely dependent on the public budget for investment, with about 75 percent of the funding coming from central government sources and the rest from the provinces. The Government has a policy that the capital investments on wastewater would not be recovered through tariffs and as a result the entire investment cost would have to be borne through publ ic resources which will have a large fiscal impact. Thus, economic and prioritized decisions ne ed to be taken for investments to minimize the burden on the public budget.

Sustainable Operations

Wastewater and drainage services are not commercial in nature and there is a need to set up proper institutional arrangements to ensure sustainable operations. For these services, options to me rge the sanitation business with a water utility in a province or to maintain or create a separate drainage company are being considered. Furthermore, the operational costs are not fully recovered and are financed through subsidies from the province. Thus, to minimize subsidies, there is a need to select technologies that do not result in high operating costs. In addition, there is a need to establish a system through which the costs are accounted for properly and recovered to minimize the burden on the provinces. The costs can be recovered through the environmental taxes (as per Decree 67) and through wastewater fees (as per Decree 88). The environmental tax can be as much as 10 percent of the water bill and is collected by the water company; the collected funds flow directly to DONRE to cover a wide range of environmental services. The wastewater fees are not in place in many towns, which limits the ability of local governments to improve sanitation services.

Relationship to CAS

The World Bank Country Partnership Strategy (CPS, 2012-2016) for Vietnam supports investments and policies organized into a strategic framework of three pillars: (a) strengthening Vietnam's

competitiveness in the regional and global economy; (b) increasing the sustainability of its development; and (c) broadening access to opportunity. The CPS also has three cross cutting themes: (a) strengthening governance; (b) supporting gender equity; and (c) improving resilience in the face of external economic shocks, natural hazards and the impact of climate change. The proposed project would directly support the CPS objective of increasing sustainability of development by improving infrastructure services in a city that generates a large portion of the GDP of the country.

The project will also address the issues of governance through proposed institutional arrangements to ensure that wastewater treatment operations are carried out in a sustainable manner. The project will be also designed to increase resilience to floods. HCMC is at risk due to climate change induced sea level rise and is regularly affected by seasonal flooding. The latter is exacerbated by increased tidal flooding from sea level rise. Robust designs will be incorporated in the project to minimize the risk of flooding at the wastewater treatment plant so that the treatment of wastewater is not interrupted.

II. Proposed Development Objective(s)

Proposed Development Objective(s) (From PCN)

The proposed project development objective (PDO) is to improve the environmental conditions in selected areas of HCMC.

Key Results (From PCN)

The achievement of the PDO will be measured through the following indicators which will be further refined during project preparation:

- The Increase in the volume of wastewater treated in the project catchment area; and
- The reduction in pollution. Biological Oxygen Demand (BOD) would be used as a parameter to measure a reduction in pollution.

III. Preliminary Description

Concept Description

HCMC's core urban area is divided into four main catchment areas: (a) Nhieu Loc-Thi Nghe (NLTN); (b) Tau Hu – Doi Te - Ben Nghe (THDTBN); (c) Tan Hoa - Lo Gom (THLG); and (d) Tham Luong - Ben Cat (TLBC). Together these four areas cover over halfofHCMC's population and most of its urban population. Over the past ten years, HCMC has undertaken a program to gradually clean-up these catchment areas improving their hydraulic capacity for drainage and installing and upgrading sewers and wastewater interceptors.

The World Bank has been actively supporting this process. The Bank-financed first HCMC Environmental Sanitation Project (HCMC ES) has effectively upgraded the NLTN catchment area and canal through the construction of over 70 kilometers of sewers, 8 kilometers of sewer interceptor, installation of a pumping station, and dredging and improving the embankments of the canal for improved drainage capacity. The result has been reduced flooding and the centralized collection of wastewater for over 1.2 million people in the catchment area.

In addition, through the Vietnam Urban Upgrading Project, the Bank is similarly supporting the improvement of the THLG catchment area which, when complete, will also lead to reduced flooding and the collection of wastewater for over 800,000 people. The Japanese Government has

been supporting similar investments in the THDTBN catchment area as part of the East West Highway project. This has resulted in a systematic upgrading of the drainage and wastewater collection capacity in the most urbanized parts of the city.

The HCMC ES2 project is a natural continuation of the Bank's HCMC ES project which closes on June 30, 2012. Under the first project, through the construction of an interceptor and rehabilitation of the drainage system, wastewater from the NLTN basin would be transferred to a pump station. Once the pump station is operational, the wastewater would be pumped under the Saigon River to District 2. The pump station and the pipe that will transfer the wastewater under the Saigon River were also included as part of the HCMC ES project. Under HCMC ES2, the focus would be to treat the wastewater from the NLTN basin. The wastewater treatment plant will be located in District 2 which is a new development area and will eventually be a financial center and provisions will be made under the project to also treat the wastewater generated in District 2.

The total cost of the project is estimated to be around US$490 million with the proposed Bank financing of US$450 million (US$200 million IDA; and US$250 million IBRD). The remaining financing (US$40 million) will be from HCMC resources which would include financing costs of resettlement and land acquisition. The following three components are proposed:

Component 1: Wastewater Interceptor (estimated cost of US$90 million with contingencies). An eight kilometer long interceptor (diameter of at least 3 meters) is planned in District 2 to transfer the collected wastewater from the NLTN basin to a wastewater treatment plant. The proposed routing of the interceptor will take into account the plans for development of District 2 and the capacity of the interceptor would be sufficient to also eventually transfer the wastewater from District 2 once the area develops. The HCMC authorities are planning to install secondary and tertiary sewerage pipes for District 2 and currently such investments are not included in the project. However, during project preparation the Bank will have further discussions with HCMC authorities to determine whether the project: (a) will support the construction of sewerage pipes in District 2; and/or (b) will support the rehabilitation of existing sewerage pipes and household connections in the NLTN Basin.

Component 2: Wastewater Treatment Plant (estimated cost of US$370 million with contingencies). A wastewater treatment plant is planned for which various options are being considered, taking into account the need to meet environmental requirements and least cost, including investment cost and combined cost. The capacity of the treatment plant will also be reviewed during project preparation taking into consideration the actual water flows to the pump station during wet weather (storm water and wastewater) and dry weather (wastewater) flows – at this stage a plant with a capacity of 480,000 m3/day is being considered but this needs to reviewed further. The treatment plant will be built in phases. The wastewater treatment plant will be sized based on hydraulic and biological loads to be determined with actual measurements during project preparation. A Design Build (DB) or a Design Build Operate (DBO) scheme is being considered where a private company will design and build the system. Under a DB scheme, the operations of the plant will be handed back to HCMC officials; under a DBO scheme the private sector will operate the plant for a given period of time and also train local staff on the operation of the plant. This treatment plant is going to be one of the largest wastewater treatment plants in Vietnam and it would be important to bring in international experience in cost effective ways to operate the plant. The project will also include a sludge disposal facility, most likely to be constructed through the resources of HCMC.

Component 3: Investment Support and Institutional Development (estimated cost of US$30

million). For a project of this size, it would be important for HCMC to have the necessary resources to ensure that the investments are carried out in a proper way and that wastewater and sanitation management in the city is sustainable from environment and financial standpoints. The cost of this component is less than 7 percent of the value of investments and is fully in line with practices elsewhere.

Under the Investment Support (US$20 million over six years), it is planned that a consulting company will be hired to assist with the pre-qualification process to select bidders for the interceptor and wastewater treatment plant, supervise construction, and regularly report to HCMC officials on the progress made. Under Institutional Development (US$10 million over six years), the following activities are planned: update of the HCMC sewerage master plan, including drainage management as the sewers and storm water drains are connected; better septage management which would inclu de measures such as having an updated inventory of septic tanks in the project area, review of the septic tank cleaning records and ways to systematically increase the emptying of septic tanks, and recommendations on septage (solids from the septic tanks) collection and disposal practices in an environmentally friendly manner; public awareness on sanitation practices in HCMC, including a program where the public should be informed about the need to not discharge solid waste in the drains as this blocks the flow of water creating floods; and institutional support to Steering Center of the Urban Flood Control Program (SCFC) and the Urban Drainage Company (UDC).

IV. Safeguard Policies that might apply

Safeguard Policies Triggered by the Project	Yes	No	TBD
Environmental Assessment OP/BP 4.01	x		
Natural Habitats OP/BP 4.04			x
Forests OP/BP 4.36			x
Pest Management OP 4.09		x	
Physical Cultural Resources OP/BP 4.11			x
Indigenous Peoples OP/BP 4.10		x	
Involuntary Resettlement OP/BP 4.12	x		
Safety of Dams OP/BP 4.37		x	
Projects on International Waterways OP/BP 7.50		x	
Projects in Disputed Areas OP/BP 7.60		x	

V. Tentative financing

Financing Source	Amount
BORROWER/RECIPIENT	40.00
International Bank for Reconstruction and Develo	250.00
International Development Association (IDA)	200.00
Total	490.00

VI. Contact point

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