INTEGRATED SAFEGUARDS DATA SHEET
CONCEPT STAGE

Report No.: ISDSC12673

Date ISDS Prepared/Updated: 23-Jun-2015

Date ISDS Approved/Disclosed: 07-Jul-2015

I. BASIC INFORMATION

A. Basic Project Data

Country:	Vietnam	**Project ID:**	P152851
Project Name:	Can Tho Urban Development and Resilience (P152851)		
Task Team Leader(s):	Marc S. Forni,Hoa Thi Hoang		
Estimated Appraisal Date:	26-Oct-2015	**Estimated Board Date:**	24-Mar-2016
Managing Unit:	GSU08	**Lending Instrument:**	Investment Project Financing
Sector(s):	Sub-national government administration (10%), Information technology (5%), Urban Transport (30%), Sanitation (10%), Flood protection (45%)		
Theme(s):	Climate change (15%), Municipal governance and institution building (20%), Other urban development (25%), Natural disaster managemen t (40%)		

Financing (In USD Million)

Total Project Cost:	310.00	Total Bank Financing:	250.00
Financing Gap:	0.00		

Financing Source	Amount
BORROWER/RECIPIENT	60.00
International Bank for Reconstruction and Development	0.00
International Development Association (IDA)	250.00
Total	310.00

Environmental Category:	A - Full Assessment
Is this a Repeater project?	No

B. Project Objectives

The project objective is to reduce flood risk and increase access to urban services in project areas of Can Tho City.

C. Project Description

The proposed project is part of the World Bank's long-term engagement on the topics of urban development, disaster risk management, and climate change in Can Tho over the last decade through lending operations such as the Vietnam Urban Upgrading Program (VUUP1) (approved in 2004 with additional financing in 2009; US$ 50.7 million for Can Tho) and its successor the Mekong Delta Region Urban Upgrading Project (VUUP2) (approved 2012; US$ 69.9 million for Can Tho) as well as numerous studies and technical assistance initiatives. The project leverages capacity building activities within areas of resilience planning (Local Resilience Action Plan, 2013), climate adaptation (TA for Can Tho City Steering Committee on Climate Change, 2009) and natural disaster management with focus on flooding (Integrated Flood Risk Management Plan for Can Tho, 2013). To date, this bundle of activities has succeeded in constructing or rehabilitating over 50km of primary, secondary, and tertiary drainage, dredged and upgraded over 8 km of canals, extended water supply to 13,500 households, provided sewer connections to 84,000 households, and connected 7,000 households to the power grid. When completed in 2017, the two urban upgrading operations will have addressed most of the large low-income areas (LIA) in the urban core.

While previous urban investments have focused exclusively on urban upgrading, the current project will support resilient urban development by proactively guiding urban growth to low risk areas near the heart of the city while improving connectivity in the city center, sanitation and the living and working environment. Integrated flood risk management and compact urban development require a balance of structural and non-structural interventions. Therefore, the proposed project is comprised of two structural components (1 and 2) and an institutional strengthening component (3) which is designed to support the implementation and operation of the structural components.

Any intervention made in Can Tho could impact other provinces and vice versa. Therefore, the flood intervention approach for Can Tho must be in line with the Delta-wide approach. Given the potential of specific investments in the Mekong to negatively impact other provinces, there are several flood risk management plans that have been, or are being, developed for the Mekong Delta Region and Can Tho City. Each of the Mekong Delta plans (MARD-developed Master Plan for Mekong Delta Irrigation and Flood Control (PM's Decision 1397 dated Sep. 25, 2012), and Dutch-supported Mekong Delta Plan (under the preparation)) converge on the priority to protect the developed urban areas/cities in the Mekong Delta, including Can Tho, through a set of flood protection structures and tidal gates. In addition, the flood risk management plans for Can Tho City (Master Plan for City's Irrigation and Flood Control (MARD's decision 1721/QĐ-BNN-TCTL dated July 20, 2012), and Comprehensive Resilience Planning for Integrated Flood Risk Management for Can Tho City (supported by World Bank/GFDRR, 2013)) prioritizes protecting the core urban area of the city as a necessary immediate action. This prioritization takes into consideration the importance of the urban core to the economic growth and development of the City and the entire Mekong Delta Region.

A combination of "low-regret" engineering solutions, including surrounding embankment, tidal gates/valves and improvement in the drainage system is the most appropriate and necessary solution to address the flooding challenges in the urban core. (The "low-regret" solutions would maximize the effectiveness of the urban flood and drainage system operation with low cost, while minimizing negative impacts on flooding and environment to the adjacent areas. Moreover, it would also be built to address the future uncertainties caused by climate change, land subsidence and fast urbanization progress.) However, none of these interventions alone is sufficient to reduce the flood risk in the City. It is necessary to complement the engineering interventions with sustainable non-structural measures, including green structures, water retention areas, institutional capacity strengthening, multi-stakeholder coordination, flood response standard operating procedures, and early warning

systems.

There are extensive needs and limited financial capacity to engage in the complex challenge of flood risk in the Mekong. Therefore, it was agreed by both the national entities and city authorities that a phased approach to integrated flood risk management should be considered, with each phase having clear targets for institutional development and infrastructure investments.

Component 1: Flood risk management, and environmental sanitation (Bank financing: US$130 million)

The objective of this component is to reduce flood and drought risk in the urban core of Can Tho. This component would support the city in implementing structural measures for flood protection, drainage and sanitation included in the Mekong Flood Control Plan, Can Tho Flood Control Master Plan, and Drainage System Master Plan. A combination of “low-regret” engineering solution, including surrounding embankment, tidal gates/valves and improvement in the drainage system is the most appropriate and necessary solution to address the flooding challenges in the urban core.

Preliminary hydraulic model results have benefitted from extensive consultation with both policy makers and urban flood risk management experts of the City and line ministries. The consensus was confirmed that polder approach, including a set of flood protection structures and tidal prevention gates, would be the most appropriate engineering solution as a short term solution to protect the core urban area of the city. See Annex 1 for more information - Option 4 and 5 seems preferable because of the reduction in population and assets exposed to the flood hazard, the complexity level of operation and maintenance, the size of resettlement and relocation, and the financing constraints. More importantly, those options would enable better flexibility in adapting to the future uncertainties caused by climate change, rapid urbanization and land subsidence. Once the investment approach is confirmed, an in-depth analysis, including detailed hydraulic modelling, as well as cost-benefit and multi-criteria analyses is required to further analyze Options 4 and 5.

Sub-Component 1.1: Priority Flood Control Investments in Urban Core (Ninh Kieu and Binh Thuy districts). A limited polder approach with combined-use road, allows for a flexible and cost effective approach. The Hoang Na road, under Component 2, runs across the city, and aims to increase the connectivity from the urban core in the east to the under-developed university area in the west. This road system can function as a flood protection structure to prevent the overflow from Binh Thuy and Cai Khe canals. As a result, the core urban area is completely protected from flooding, while the impact of higher water levels outside the protected area is reduced. The design of the level of flood protection, especially for the combined function Hoang Na road, needs to be considered. In addition, two tidal sluice gates in Binh Thuy river and Cai Khe canal would better manage the water level in both of Binh Thuy river and Cai Khe canal. As a result, the safety level of the combined flood prevention – road function Hoang Na road would be smaller than the safety level of Hau and Can Tho embankment systems.

Sub-Component 1.2: Drainage and Waste Water Systems: Many parts of the existing sewer system in the urban core is very old (over 40 years), and the capacity of the system has substantially reduced over time. Moreover, the City faces challenges due to tidal intrusion in its canal network. In addition, the City still faces serious issues with disposal of solid waste and industrial waste in its canal network. The current proposed strategy for improvement of the drainage system is consistent with the existing city Drainage Master Plan; however, the proposal is somewhat fragmented, and there is a

concern that the proposal will not realize the flood protection impacts the City desires. Therefore, further analysis will be required to better identify the appropriate drainage investments to improve drainage and increase environmental sanitation. The City is encouraged to further develop the hydraulic model in order to identify the highest impact investments, and the team stands ready to support this effort.

Sub-Component 1.3: Non-structural measures: It is necessary to complement the engineering interventions with sustainable non-structural measures, including green structures, water retention areas, institutional capacity strengthening, multi-stakeholder coordination, flood response standard operating procedures, and early warning systems.

Component 2: Urban corridor development (Bank financing: US$110 million)

The objective of the transport investments are to increase regional connectivity and encourage new urban development in the less flood prone area of Cai Rang, which will be dense and walkable. This component will support the city in implementing priority transportation investments identified in the city's Transport Master Plan (2013) and approved SEDP (2013). Three road links will be financed, including: i) the Quang Trung bridge crossing the Can Tho River; ii) the Tran Hoang Na Road, including NH1 side roads from Tran Hoang Na to IC3 intersection ; and iii) the Cach Mang Thang Tam to PR 918/Bui Huu Nghia road. The last of these road links will serve the dual purpose of providing flood protection for the urban core.

Sub-Component 2.1: Quang Trung bridge crossing from Ninh Kieu to Cai Rang: The rationale for enhancing this urban corridor is to promote a strong link between the existing urban core and the Cai Rang district, which is planned to be the biggest growth area between now and 2030 (growth from current 80,000 population to 400,000). The project would support a doubling of the capacity of the bridge (proposed bridge is a second unit of a twin bridge, of which the first unit of 11m width was built in year 2005) and capacity to plan for higher density, inclusive development in Cai Rang (under component 3). On the northern end of the corridor, the existing area in Ninh Kieu has a density of 25,000 – 35,000 people/km2. On the southern end, the corridor meets with National Road 1 (NH1) to HCMC. The proposed bridge would be about 870m in length including the 480m of bridge and 390m approaching road section. There is a bottle neck because the road has a width of 40m on one side and 56m on the other side that would need to be addressed. The bridge width would be 11m, consistent with the existing bridge.

Sub-Component 2.2: Tran Hoang Na road and bridge: The rationale for this link is to provide connectivity from the new city bus terminal to the city center and is expected to share traffic with other roads like Quang Trung bridge, NH91b. It is also expected to relieve the traffic jam that occurs during flood episodes. Finally, the road would also help to reduce traffic at the IC3 intersection where two existing bridges (Quang Trung and Hung Loi) are now joining to this intersection. This corridor would connect the city center starting from Nguyen Van Cu, crossing 3/2 road, 30/4 road and end at National Highway 1 near an inter-provincial bus terminal of about 10.3ha, which is under construction. The proposed road would be 3.5 km long including a bridge of about 594m long crossing the Can Tho river. Side roads along NH1A will facilitate the connection of Tran Hoang Na road to bus terminal and to NH1A. The solutions for ensuring not only smooth traffic but also road safety will be carefully studied and confirmed. The feasibility study and design will be financed by city budget and is expected to be commenced by mid of June, 2015.

Sub-Component 2.3: Cach Mang Thang Tam- Nguyen Van Link link: The rationale for the proposed road is to provide access to a planned university complex, sport center, new resettlement areas, and LIA areas along the road to commercial areas of the city. In addition, it is expected to serve as a ring road section to help the connection with other provinces like Hau Giang, Soc Trang, Bac Lieu, Ca Mau, and HCMC so that traffic, especially freight traffic, can bypass the city without going through the city center. The proposed 5.3 km road will start at Cach Mang Thang Tam road, crossing Vo Van Kiet road, NH91B/Nguyen Van Linh and end at provincial road 918/Bui Huu Nghia road. This road link would be dual purpose and serve as a key portion of the flood risk management investments to protect the urban core. The width of the road is proposed to be 40m, pending the finalization of the design.

Component 3: Infrastructure systems to improve spatial planning, flood risk management and transport (Bank financing: US$10 million):

The objective of this component is to build management systems to improve spatial planning and flood risk management, while also supporting the development of a transport management system. This component would finance systems to improve management capacity of the city.

Sub-Component 3.1: Planning and operation of the city integrated flood risk management system. Currently, there is significant fragmentation and overlap in managing and operating the flood risk management system among the key authorities. This lack of clarity makes it challenging to effectively plan, implement, and operate the flood risk management system in Can Tho. Flood risk management systems will help the city develop: i) improved protocols in operating the city flood control and drainage systems in case of emergency (high tide, river flood discharge, etc.); ii) clearer responsibilities of the key agencies, including DARD, DoC and Water Drainage and Supply Company, in managing and operating the city flood control and drainage systems; iii) an Operations & Maintenance (O&M) funding framework for the systems; and iv) a coordination protocol between the City and other Mekong provinces for integrated river basin management, and to share information and enhance flood early warning.

Sub-Component 3.2: City-Level Geospatial systems for urban development and flood risk management. To provide support for the effective operation of the flood risk management protocols and decisions, a City-Level Flood Risk Information Management System would need to be established in the city. Currently, most information in the City is paper-based. Instead of creating a new information system, the project will support the development of a common IT protocol and platform (e.g. acquisition of hardware, software, equipment and surveying services necessary for establishment of the GIS) to ensure all information sources managed by various agencies are synchronized and accessible. The system will include data on public and private assets, technical infrastructure (e.g., drainage/wastewater networks, flood control system, water utility infrastructure, electricity supply lines, etc.), transportation and groundwater monitoring data as well as facilitate the overlay of flood risk data. Support to IT skills development will be provided to all City agencies to ensure the regular update and maintenance of information are put into place. This activity will coordinate closely with the other World Bank-funded Mekong Adaptation Program, which is under the preparation.

Sub-Component 3.3: Information system for planning and operational decisions: Two separate monitoring networks will be established for canal water quality and land subsidence management respectively. Support will also be provided to establish a risk sensitive spatial planning system,

including data collection, flood modelling, detailed flood hazard mapping, exposure data analysis, and risk mapping. This platform will also be able to support post-flooding damage and loss assessments. An information system for emergency response and early warning will help the city improve the operation of flood control and drainage systems. To ensure effectiveness and sustainability, the involvement of community and local stakeholders will be central, particularly in order to improve “last mile” early warning efficacy. The processed information would be accessible by relevant agencies and the public to provide support to emergency and public early warning operations. In addition, the system would be used as a media channel to raise public awareness on flood risk and solid waste management.

Sub-Component 3.4: Transport systems management and feasibility: A study on establishment of Public Transport Authority; and ii) preparation of a pilot bus rapid transit (BRT) corridor for the city. This activity is a good opportunity for the city to utilize the concept of transit oriented development (TOD) and pedestrian oriented design (POD) guiding land use planning and development along integrated transport corridors. The proposed Quang Trung bridge could create an excellent candidate for a mass transit corridor along Vo Van Kiet – Quang Trung bridge – Vo Nguyen Giap corridors. The corridor will be about 20km long with good conditions for a BRT corridor as it is connecting the international airport to the existing city core in the north to new development area in Cai Rang in the south of Can Tho river, and it has appropriate physical features (width, median etc.) as required for a BRT route.

D. Project location and salient physical characteristics relevant to the safeguard analysis (if known)

The project will be implemented in the urban core area of Can Tho city, Vietnam, and in the immediate surroundings of Can Tho City in the case of component 2—urban corridor development. The city of Can Tho is the 4th largest city in the country, with a populationof approximately 1.25 million, and an urban annual growth rate of 5.0 percent between 2005- 2012. Moreover, Can Tho is becoming a hub for high-tech agro-industrial production and aquaculture, food processing, and export, thereby becoming a major actor in promoting food security in the Mekong Delta. During the rainy season, 30%-50% of the city is flooded from 30-50 cm of water.

E. Borrowers Institutional Capacity for Safeguard Policies

Can Tho city has experiences in working with the Bank in general and is familiar with the Bank’s safeguards policies in particular. The PMU staff who worked on Bank-funded projects (VUUP and MDR_UUP), have an understanding the Bank policies and requirements. However, close guidance for the preparation of the relevant project safeguard documentation (e.g., good EIAs, RPs for category A project) as well as oversight on the implementation of EMPs, RPs will be required. An assessment of the Client capacity for safeguards implementation is required during project preparation, and recommendations for training will be made as appropriate. A consultant would be retained to assist in the preparation of safeguards TORs.

F. Environmental and Social Safeguards Specialists on the Team

Hoa Thi Mong Pham (GSURR)

Noreen Beg (GENDR)

Pierre Arnoux (GSU02)

Thuy Cam Duong (GENDR)

II. SAFEGUARD POLICIES THAT MIGHT APPLY

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	OP 4.01 is triggered and the project is classified as a category A due to the potential significant environmental and social impacts associated with the projects investments and activities, specifically under Components 1 and 2. The project has numerous positive environmental and social impacts. It will (under all technical scenarios) reduce flooding in Can Tho's urban core and drainage and sanitation works, in addition to reducing drain overflows, and improve public health, improve the aesthetics of the city. It will also enhance the welfare of the Project Affected Persons who will be relocated to new sites with improved amenities. Nevertheless, there are potential significant adverse impacts during the project construction and operation phases under component 1 – key among which will be changes in the hydrology and ecological flow of the Can Tho and Hau rivers. Thus, the project will be considered a Category A project. The Component 2 involves priority transport investments, under which about 3 urban roads and 2 bridges will be financed. These potential impacts of these investments are site-specific, can be managed by good construction practices. As the project is classified as a Category A, a full scale Environmental and Social Impact Assessment (ESIA) is required to be prepared by Client. In addition to other elements of EA documents, specific requirements for category A ESIA would include the preparation of an Executive Summary, a cumulative or strategic impact assessment, alternatives analysis and public consultation process (including at least two rounds of public consultations on the ESIA). The ESIA will comply with the Bank safeguard policies and the Vietnamese regulations. The ESIA will apply WBG Environmental, Health, and Safety Guidelines. Social assessment will focus on project impact other than involuntary resettlement, especially on the poor and vulnerable people who likely suffer more from flooding and environmental pollution. A Social Management Plan (SMP) will be combined with EMP to become ESMP with specific actions to be implemented.

		Civil works to expand and enhance existing roads and bridges along existing transportation networks will necessitate the preparation of a plan to manage occupational and commuter safety during the construction period (to include appropriate road signage and closings, use of Personal Protective Equipment by construction workers, securing of electricity cables and switchboxes, and netting to prevent falling debris). Construction waste management plans will also form part of the Environmental Management Plans for all civil works under the Project. Given the existence of unexploded ordnances throughout the Mekong Delta, a mine clearance program must be undertaken prior to the start of civil works, and all workers undertaking dredging must operate with appropriate protective measures, including sandbagging of cranes, etc. The Borrower should also refer to the World Bank Group Environmental Health and Safety Guidelines, which, as well as sector-specific guidelines, provides guidance on best practice occupational and community health and safety procedures: Any dredged material must be tested for Acid Sulfate Soil, and be treated and safely disposed of. Further, OP 4.01 applies also to component 3 investments linked to development of protocols for operating the city flood control and drainage systems in case of emergency; and technical studies on transport management for which TOR will include requirements to follow applicable safeguard provisions.
Natural Habitats OP/BP 4.04	Yes	The project interventions under Component 1 include strengthening and construction of river embankments, construction of tidal sluice gates, canal dredging and extension of the sewerage system. The project interventions under Component 1 and 2 include strengthening and construction of river embankments, construction of tidal sluice gates, canal dredging and extension of the sewage system, bridge construction. These project activities would impact the ecological flow of the Can Tho and Hau rivers, impacting aquatic flora and fauna, (although it

		is worth noting that there is already a high level of human intervention due to the urbanized nature of the Project Area. Hydrological modeling will be undertaken to limit seasonal impacts on aquatic fauna as far as possible. Changes in the ecological flow of the rivers may occur due to the installation of sluice gates and other flood/salinity control measures; leading to a reduction in the diversity and quantity of fish populations. Efforts will be taken to limit impacts on aquatic fauna, for example, through the placement of fish ladders at the proposed sluice gates. Therefore OP 4.04 – Natural Habitats - is triggered.
Forests OP/BP 4.36	No	The project is implemented in the urban core and will not impact forested areas or plantations.
Pest Management OP 4.09	No	The project activities are not expected to use pesticides, nor lead to increased usage of pesticides. Manual clearing measures will be employed for civil works.
Physical Cultural Resources OP/BP 4.11	Yes	Preliminary site screening has not identified any PCRs in the project location that could be potentially affected by the project. However, the presence of any cultural, historic, or religious monuments, or graves will be assessed during project preparation as part of EA project. The policy is triggered as the project includes dredging and excavation activities under Components 1 and 2, which may result in chance finds.
Indigenous Peoples OP/BP 4.10	No	Screening on ethnic minorities was done by the PMU and Bank social specialist, based on statistical data and actual situation of the city. Ethnic minorities are concentrated in areas that are not covered by the proposed project. There are some ethnic minorities scattered in the project area together with the Kinh people, but they do not form a community. Therefore OP/BP 4.10 on Indigenous People would not be triggered for this project. The final screening results will be incorporated in the ESIA report.
Involuntary Resettlement OP/ BP 4.12	Yes	According to the list of the proposed investments of the project component 1 and 2, land acquisition would cause about 3,300 households to be affected, 1,400 of which would need to be relocated. Impacts on livelihoods are also anticipated due to the important scope of relocation. Therefore, OP/BP

		4.12 will be triggered for this project. A Resettlement Policy Framework will be prepared to comply with the Bank OP4.12 to serve as a legal basis for compensation and resettlement activities of the project (as required by the Land Law). As all the project activities will be known during project preparation, a Resettlement Plan (RP) will be developed before the project appraisal to be in line with the prepared RPF. The RP will have to be updated if there will be substantial changes in the project design and/or in the scope of the project impact during project implementation. Preliminary screening of linked activities showed that there are three linked projects, two of which were reviewed (in 2011-2012) during preparation of the Bank-funded Mekong Delta Region Urban Upgrading project (MDR-UUP) and the due diligence review results had showed that there were no outstanding issues and no further actions were required. The third one is MDR-UUP itself, all land acquisition activities of which have followed the agreed RPF and RP of the project, so no further action would be needed.
Safety of Dams OP/BP 4.37	No	The project will not finance the construction/ rehabilitation of any dams nor will the project rely on any existing dams. The project will only involve the construction of new embankment and rehabilitation of existing embankment. As a result, the policy is not triggered.
Projects on International Waterways OP/BP 7.50	Yes	The project triggers OP 7.50 as the interventions in Component 1 will impact the hydrological conditions of Hau and Can Tho rivers, which are tributaries of the Mekong River, an international waterway. As such, other riparian states (Cambodia, Laos, and Thailand) will be notified or a waiver of notification will be sought from Bank management.
Projects in Disputed Areas OP/ BP 7.60	No	The project is not implemented in disputed area.

III. SAFEGUARD PREPARATION PLAN

A. Tentative target date for preparing the PAD Stage ISDS: 23-Sep-2015

B. Time frame for launching and completing the safeguard-related studies that may be needed. The specific studies and their timing[1] should be specified in the PAD-stage ISDS:

[1] Reminder: The Bank's Disclosure Policy requires that safeguard-related documents be disclosed before appraisal (i) at the InfoShop and (ii) in country, at publicly accessible locations and in a form and language that are accessible to potentially affected persons.

a. ESIA TOR will be cleared by May 2015
b. RPF for the whole project will be developed by June, 2015
c. RP for the proposed project will be ready before project appraisal
d. Minimum two public consultations on the project social and environmental safeguard documents will take place before appraisal.
e. ESIA acceptable for the Bank will be ready by project appraisal.

The Environment and Social Impact Assessment will be prepared and made publicly available by the end of October, 2015.

IV. APPROVALS

Task Team Leader(s):	Name: Marc S. Forni,Hoa Thi Hoang	
Approved By:		
Safeguards Advisor:	Name: Peter Leonard (SA)	Date: 07-Jul-2015
Practice Manager/ Manager:	Name: Abhas Kumar Jha (PMGR)	Date: 07-Jul-2015

Public Disclosure Copy