



# Concept Environmental and Social Review Summary

## Concept Stage

### **(ESRS Concept Stage)**

Date Prepared/Updated: 11/14/2019 | Report No: ESRSC00935



**BASIC INFORMATION**

**A. Basic Project Data**

Country	Region	Project ID	Parent Project ID (if any)
Vietnam	EAST ASIA AND PACIFIC	P171700	
Project Name	Vinh Long Urban Development and Climate Resilience Project		
Practice Area (Lead)	Financing Instrument	Estimated Appraisal Date	Estimated Board Date
Urban, Resilience and Land	Investment Project Financing	3/30/2020	6/15/2020
Borrower(s)	Implementing Agency(ies)		
Socialist Republic of Vietnam	ODA PMU of Vinh Long Province		

Proposed Development Objective(s)

To improve access to infrastructure and connectivity and to reduce flood risk in the urban core area of Vinh Long city.

Financing (in USD Million)	Amount
<b>Total Project Cost</b>	<b>219.40</b>

**B. Is the project being prepared in a Situation of Urgent Need of Assistance or Capacity Constraints, as per Bank IPF Policy, para. 12?**

No

**C. Summary Description of Proposed Project [including overview of Country, Sectoral & Institutional Contexts and Relationship to CPF]**

18. The PDO outcome indicators are:

Table 1. PDO Outcome Indicators

PDO Outcome Outcome indicator

- Improved access to infrastructure • Number of people with access to new or improved basic urban infrastructure facilities and services (number, percentage of which female).
- Users satisfied with the new or improved drainage and sanitation services (percentage, percentage of which female)



- Improved connectivity • People with access to new or improved roads (number, percentage of which female)
  - Reduction in travel time between: i) Ward 8 and Ward 9; ii) residential areas along National Road 53 and National Road 1A; iii) areas along national roads 53, 57 and 1A; and iv) central area and the planned industrial zone along the future HCMC-Can Tho highway.
- Reduced flooding risk • People living in the urban core protected against a combination of 10-year return period local rainfall flood and 100-year return period riverine flood (number, percentage of which female)
- Improved urban management • Integrated flood risk management system developed

#### D. Concept Description

19. Proposed project focuses on investments unlock development potential of urban core. Vinh Long is one of seven cities in the Mekong Delta Region currently implementing the World Bank financed SUUP Project, which invests \$35mln for improving basic infrastructure in low income areas in Vinh Long. However, without a comprehensive approach to manage flood risks, Vinh Long city’s core urban area remains most exposed to flood risk due to the high concentration of poor population living in LIAs, the low elevation, and a lack of investments in drainage, wastewater collection and treatment and flood protection infrastructure that exacerbates the impacts of flood events. The severe flood risk in the core urban area, together with the lack of integrated planning, has led the city to sprawl outwards along national roads and main waterways in different directions, while large pockets of land in the core urban area remain undeveloped. This fragmented development pattern results in high costs for land acquisition and infrastructure provision, the loss of productive, water-retaining agricultural land and increased greenhouse gas emissions, as well as high transport costs that impede the realization of an agglomeration economy. The proposed project will therefore focus on priority investments and technical assistance that aim to unlock the development of core urban areas and promote a more compact and sustainable development pattern.

20. The proposed project will include a combination of structural and non-structural interventions to improve access to infrastructure and to reduce flood risk in the urban core area of Vinh Long city. The urban core will be protected through a comprehensive set of flood mitigation measures, including flood control systems, wastewater collection and treatment and nature-based solutions to reduce flood risk and improve environmental and sanitation conditions. Connectivity within the urban core and with key economic centers will also be improved. These measures will eliminate the physical constraints to development in the urban core, increase land values and stimulate private capital investments, enabling the redevelopment of the urban core and reducing the pressure for urban sprawl. By providing comprehensive improvement to infrastructures in the low-income areas in the urban center and increasing the connectivity of these areas to other parts of the city, especially centers of employment, the project is expected to improve the living conditions of the poor and vulnerable populations and increase their accessibility to jobs and public services. Citizens and community organizations will be engaged throughout the project preparation and implementation process in order to raise their awareness about flood risks and enhance their ownership of the project. Providing technical assistance to improve urban planning, transport management and the operation and maintenance of infrastructure in the urban core, will enable the city to become more interconnected, livable and resilient to disasters.

21. In the interest of maximizing the available finance for development, opportunities will be identified for increased private sector participation in the proposed environmental sanitation and urban transport investments. The



project will explore options for private sector participation through partial financing of infrastructure, utility reform, and network operations by private operators. Furthermore, through investments in critical infrastructure such as urban drainage and flood protection, there are expected to be spillover benefits into investments in industrial zones and tourist attractions, that will lead to further private investment in the city.

22. The project will also adopt a gender sensitive approach to ensure equal rights for both men and women to participate in the project, and equal opportunities to access and benefit from services supported by the project. Studies show that women in general tend to be disproportionately impacted by floods, especially given their roles as primary caregivers and providers of food and fuel. Improvement of the road network, environmental sanitation, and flood mitigation through the project is expected to increase women’s convenience in accessing markets and jobs and sending children to school, while reducing their housework related to cleaning up during/after floods and enabling some of them to start home-based businesses while attending to their families. During project preparation and implementation, gender-segregated consultations will be conducted and technical designs of investments will consider the different needs for women and men (e.g., differentiated travel patterns, perception of safety, and universal access design principles). The Women’s Union at the ward/community level will be actively engaged in disseminating project information, providing feedback, organizing consultations and training, and serving as liaisons between the community and PMU. During project evaluation, the project will monitor indicators disaggregated by gender.

#### Project Components

23. The project is organized around four components:

Component 1: Flood risk management and environmental sanitation (WB Loan/Credit: US\$ 93.3 million)

24. The objective of this component is to reduce flood related risks and improve environmental sanitation in the urban core of Vinh Long city through investments in drainage and sewage networks, wastewater treatment and flood protection measures. Design of this component will be based on assessment of the flood risks, including flood hazard and the vulnerability of the affected community, and consists of a balance between gray and green infrastructure (or nature-based solutions). The structural measures include improving the pathways of floods, by rehabilitating and upgrading the canals and drainage and improving sewage system to reduce pollution during flooding, protecting the receptors by expanding and upgrading roads and building embankments, as well as ways to control the sources of flooding including Sustainable Urban Drainage Systems (SUDS), flood retention and detention through rainfall capture and runoff control using nature-based solutions. Nature-based solutions are proposed to reduce runoff and minimize flooding, such as water absorbent landscape, pervious pavement, detention and retention ponds; while bio-engineering methods are proposed as more natural ways to stabilize canal embankments using soil bags, gabions, erosion control blankets, geogrids etc. These solutions will be incorporated to reduce the burden and associated cost of the gray infrastructure. Non-structural measures will focus on putting in place effective mechanisms for institutional coordination, integrating flood risk analysis in urban planning and management, and improving operation and management (O&M). In addition, the design of infrastructure will factor in access to services for women and men and universal design (i.e., ensuring accessibility for older people and people with disabilities) considerations.

25. Sub-component 1.1: Urban drainage system. This component will finance the rehabilitation and improvement of the canal and drainage system in the core areas, including construction of new drains, dredging of canal systems,



creation of rainwater retention areas, etc. This is critical for enhancing the capacity of rainfall capture, runoff control and conveyance to reduce flood risks and sustaining the significant private and public investments in the inner parts of the city. The designs of drainage infrastructure will take into account climate change scenarios produced by MONRE and reflect them through improved hydraulic modeling works and flexible use of structural and non-structural approaches. Secondary flow paths for conveyance of flood water in excess of the drainage system capacity should be considered. In terms of geographical coverage, this sub-component will prioritize the improvement of basic infrastructures in six low-lying residential areas in the urban center covering about 121 ha and benefiting 12,000 inhabitants, most of whom have relatively low incomes. The scope and design of investments in these areas will be developed through a participatory process similar to that used under the SUUP.

26. Sub-component 1.2: Wastewater collection and treatment system. This includes the construction of a wastewater treatment plant and rehabilitation and construction of sewer collection networks to collect and treat domestic wastewater before it's discharged into water bodies. Based on the findings of an Asian Development Bank (ADB) report, the wastewater collection and treatment will be prioritized for urban inner areas with an estimated service population of about 119,000 people (about 80% of city's total population) and a land area of about 2,060 ha. A separate system for wastewater collection has been proposed. The treatment capacity of the WWTP in 2023 is estimated to be up to 15,000 m<sup>3</sup>/day-night, but the underlying calculations are still being reviewed. In addition to improving the environmental sanitation conditions, the wastewater collection and treatment will also contribute to improving surface water quality. Technical designs for this sub-component will also explore incorporation of nature-based solutions such as constructed wetlands and treatment ponds. Operators will be equipped with appropriate O&M equipment including vehicles such as suction trucks and combined high-pressure cleaning trucks. The use of renewable energy sources such as solar energy for covering part of the treatment plant's energy demand will be explored. Wastewater collection and treatment will require comprehensive capacity building and training of all involved stakeholders, as well as institutional development and strengthening. The project will also consider mechanisms to support household connections and cost recovery of WWTP operation.

27. Sub-component 1.3: Flooding mitigation in the urban core area. A polder approach was proposed for flood mitigation, which can be expressed as a structural system consisting of: i) a closed "ring embankment with tidal sluiceways/valves" to protect areas from high water on the edge of rivers (river and tide floods); and, ii) a drainage system including open canals, sewers, storm rainwater retention, and pumps (if needed). According to the Flood Control Plan for Vinh Long city approved in 2013 by Ministry of Agriculture and Rural Development (MARD) and the Adjusted Construction Master Plan for Vinh Long city currently being prepared, three small polders are proposed in the inner city of Vinh Long to protect the core urban area (2,059 ha) from river and tidal flooding. It is proposed that the polder dikes to the south will serve the dual purpose of flood control and road connectivity, through aligning the raised urban main road No.2 along the southern polder dike. This polder approach with a dual-purpose road is considered more flexible and cost-effective compared to the conventional ring embankment approach. A flood risk assessment based on updated hydraulic modeling of the core urban area of Vinh Long city is being carried out to validate the polder approach and optimize options for nature-based solutions. The stabilization of the embankment will consider green bio-engineering methods. Where possible, the creation of amenities comprising green spaces with native and shade providing tree species and promenades with tracks and boardwalks along the embankment will be provided for both cyclists and pedestrians in order to turn the waterfront into an attractive recreational area.

28. Sub-component 1.4: Development and operation of an integrated flood risk management system in the city. Currently, there is considerable fragmentation and overlap in flood risk management responsibilities among key



agencies. This lack of clarity reduces effectiveness in planning, implementation and operation of the flood related infrastructure in Vinh Long. Improvement to the flood risk management system will enable the city to: i) define clear roles and responsibilities of key agencies, including DARD, DoC and Water Supply and Drainage Companies, in the operation and management of the city flood control and drainage system; ii) improve protocols in operation of the city flood control and drainage system in the case of emergency (high tides, river flood discharge, etc.); iii) develop an operation & maintenance (O&M) framework for the systems; iv) develop an improved early warning information system, as well as conduct public awareness raising through existing mass media and organizations and coordinate with other Mekong provinces on information sharing; and v) if the polder approach is adopted, install a SCADA system in the flood mitigation structures including devices such as remote water level sensors, rain fall recording stations, hardware and software for internal and external data processing and operation of sluice gates.

Component 2: Strategic corridors development (WB Loan/Credit: US\$ 41.5 million)

29. This component will finance the prioritized investments in roads as identified in the draft Adjusted Construction Master Plan of Vinh Long City to increase regional and intra-city connectivity. Development of the core urban area is currently segmented by several national roads with the inter-city traffic flow going through the city, causing safety concerns and constraints to compact urban development. The proposed roads will improve traffic safety by providing alternative routes for the inter-city traffic to bypass the city center, provide better accessibility for residents to jobs, education, and other services, and allow for mixed land uses and densification in less flood prone areas. The “green roads” will be proposed which will be tree lined, act as green shade providing corridors and include nature-based solutions to deal with rainwater runoff. Increased accessibility and connectivity as a result of the new and improved transport infrastructure is likely to increase land values and investment opportunities along transport corridors, which is value-creation that the government can capture using a variety of mechanisms and convert into public revenue. In doing so, the city has the opportunity to proactively guide urban growth to areas with lower flood risk and densify the urban core area, which will be protected by the flood protection scheme.

30. The project will also promote non-motorized transport options as well as consider the future creation of urban public transport networks in the design of main roads. The road width will be based on sound analyses of travel and traffic demand. Traffic safety issues will be thoroughly reviewed and addressed, especially at intersections with major roads and transit roads of national highways/bypasses, as well as pedestrian crossings. To address the potential impacts of climate change, road drainage structures will be designed based on hydrologic analyses that adopt climate change scenarios while the elevation of roads will take into account projected increases in seawater levels. The design will also incorporate nature-based solutions such as “green roads” comprising pervious pavement and water absorbing tree pits and landscape, as well as universal access criteria such as providing a network of accessible pedestrian routes, appropriate tactile pavement, improved sidewalk space and pedestrian crossings, creation of appropriate parking spaces for motorcycles to reduce the obstruction to pedestrians, and prioritizing pedestrian connections to major destinations such as schools, employment centers, markets and shopping areas and public transportation stops.

31. Component 2 will finance the following investments:

- Vertical connection road between Ward 8 and Ward 9, which is currently a missing link in the urban road network.
- Urban main road No. 1. This road plays a role of a horizontal arterial in the urban road network to facilitate connectivity between residential areas along National Road 53 and National Road 1A.



- Urban main road No. 2. This will link national roads 53, 57, 1A and 1A bypass. This road will divert the inter-city traffic from going through the city center, and also provide flood control through tidal gates and pumping stations installed along the road.
- Extension to Vo Van Kiet Street. This enhances connectivity of the central area with the HCM-Can Tho expressway in the future, and with the planned industrial zone in this area.

32. The first two roads will run through the existing built-up area and serve to create the important vertical and horizontal links in the urban road network. The Urban main road No. 2 will serve multiple purposes, as a development boundary in the south, horizontally linking several national roads so as to prevent inter-city traffic from mixing with intra-city traffic, at the same time the elevated road embankment will serve as part of the flood control scheme. The extension to Vo Van Kiet Street is a major transport link to connect residents with jobs in the industrial areas. Special attention will be paid to the development control along urban main road No. 2 and the extension to Vo Van Kiet Street in order to avoid unintended urban sprawl.

#### Component 3: Resettlement Area Development (WB Loan/Credit: US\$ 4.9 million)

33. The project will try to minimize resettlement impacts through adopting fit-for-purpose standards and appropriate design, however, significant resettlement impacts are expected due to the proposed investments, particularly under the embankments in Component 1 and the roads in Component 2. An estimated 445 households may have to be relocated under the project. This component will ensure improved living conditions and security of tenure for those target communities who are subject to relocation and resettlement under the project. An investment for technical and social infrastructure at the resettlement site in Ward 8 of Vinh Long City will be proposed with green and nature-based solutions incorporated, such as park connectors, water absorbing tree pits and landscapes, pervious pavements, stormwater detention ponds, raingardens, etc. This resettlement site covers an area of 12.5 hectares which is currently agricultural land and not occupied by any households, easing the compensation process. In addition, the resettlement site is assessed to be appropriate as it is just 5 km from the city center and close to National Road 53. Services (water, drainage, electricity, access roads) are already present along the proposed resettlement area, which will facilitate the development of the site.

#### Component 4: Enhancing Climate Resilience in Urban Management (WB Loan/Credit: US\$ 2.4 million)

34. This component aims to improve urban management in a climate and risk informed manner and to set the stage for the development of Vinh Long as a smart city. The proposed project will support implementation of Vinh Long's smart city ICT framework currently being developed, through investments in data and ICT infrastructure including software, hardware and equipment, in conjunction with counterpart fund from the province. It will finance development of a geospatial data sharing platform to improve data sharing across different departments, and specific smart city applications including information management systems in flood risk management, transport management, and equipment for improving Operation and Maintenance (O&M) of the newly invested infrastructure.

- Developing a geospatial data sharing platform and leveraging ICT for improving urban management. A geospatial data infrastructure that integrates spatial and non-spatial data is important for multi-dimensional assessments on climate resilience and serves as a foundation for creating applications for monitoring, evaluation and enforcement of plans. This activity will support the development of a data sharing platform to integrate multiple data sources from different departments in Vinh Long. Proper institutional mechanisms and procedural guidelines for data





sharing and updates will need to be developed, as well as strengthening the capacity to manage and use the data platform to support various city planning and management functions. In addition, this activity will also pilot community-based initiatives using mobile applications to improve real-time disaster monitoring and management such as flood and erosion.

- Information system and equipment for improving Operation and Maintenance. Most cities in Vietnam suffer from a lack of clarity of the institutional and funding arrangements as well as practical skills and experience for O&M, and Vinh Long is no exception. Investment in infrastructure maintenance is critical to reduce vulnerability to disasters and climate risks, reduce contingent liability and to ensure sustainable economic growth. This activity will develop an O&M strategy based on vulnerability assessments of the city's critical infrastructure, and identify suitable information systems for improving O&M. Operating departments of the newly invested infrastructure will be supported with appropriate equipment and capacity for O&M.
- Effective transport management and equipment toward smart transportation system. The objectives are to improve traffic management and integration of transport and flood management in the city. This activity will: i) integrate transport data with the city geospatial data sharing platform as mentioned above, to enable travel demand analysis as inputs to transport planning; ii) improve traffic safety through deploying intelligent transport systems (ITS), including installing traffic signals at intersections along the project corridors; iv) in coordination with DOT's ongoing proposal, install speed camera and vehicle weight control system within the city area; and v) enhance DOT staff capacity in the application of ITS in traffic management and transport planning.

35. Project implementation support. TA will be provided for: (i) the preparation of technical designs for infrastructure investments; (ii) independent monitoring of Environmental and Social Framework (ESF) standards; (iii) independent financial audits; and (iv) strengthening implementation capacity for project management, ESF standards, financial management, procurement, and monitoring and evaluation.

#### D. Environmental and Social Overview

D.1. Project location(s) and salient characteristics relevant to the ES assessment [geographic, environmental, social]  
Vinh Long city is the capital of Vinh Long province, the second smallest province among the 13 provinces in the Mekong Delta Region (MDR). The city is about 140km southwest of Ho Chi Minh City and 40km north of Can Tho city (the centre of the MDR provinces). The two main branches of the Mekong river namely the Co Chien river (800 to 2500m wide, maximum flow rate of 12,000 to 19,000m<sup>3</sup>/s) and the Tien river run along the northern part of the city and are influenced by irregular semi-diurnal tidal. These rivers are connected to smaller rivers and a relative dense canal system in the city. Light salinity intrusion affects some communes along the Co Chien river several days annually. Rainy season lasts from May to November with rainfall accounts to 93 to 96% of annual precipitation (averaged at 1300-1700mm per year). Vinh Long city is subjected to frequent flooding mainly due to heavy rain, high tide and contributions of flood from the Mekong river, urbanization and the impacts of climate change. Rainwater follows existing ditches and drains to waterbodies. Inner city canals have been sedimented and/or encroached for housing, garden or even waste dumping. Canal flow is only fed by rainwater and flood water several months each year during the rainy/flood season, however, even during that time, water pollution from untreated domestic wastewater is obvious, evidenced by the very dense floating vegetation (water hyacinth causing frequent blockage).





Stagnant black water exists along the small ditches that run around residential clusters where drainage/sewer is not available causing odour, unhygienic conditions and nuisance. River sand and clay are the main construction materials available in Vinh Long.

Agricultural land, gardens and urbanized built-up areas are the most common ecosystems in Vinh Long province. Along the Co Chien river concrete structures are common. According to the provincial's environmental report, only small patches of natural vegetation with low biodiversity value remain, and are scattered along the rives/canals banks. However, some sections of the inner city canal embankments remain relatively green with narrow strips of vegetation and trees including water coconuts, a typical aquatic tree species in the Mekong Delta. The existence of aquatic fauna, particularly river fish, and birds are diverse, some species with high economic and/or biodiversity values. In urban area, aquatic environment has been affected by pollution from urban dense residential centres. Vinh Long province's Biodiversity Conservation Plan (year 2015-2020 with vision to 2030, approved in 2016) proposed a research program on planting native trees and creating green space in urban areas together with a communication program on biodiversity and environmental protection. There are number of cultural heritage sites including several national-recognized sites in Vinh Long.

Vinh Long city has 11 administrative units, comprising of 7 wards and 4 communes, covering a total area of 48.01 km<sup>2</sup>. According to the Census 2014, Vinh Long city has a population of 141,136 people, of which 96.3% are engaging in the agriculture sector. The urban residents account for 76.21%, concentrate on the inner urban wards, in which ward 4 is the most populated (18,837 people). The population density is 7,982 people/km<sup>2</sup>. The city's economic structure in 2015 includes commercial-services (64%), industrial and handicraft (32%) and agriculture and fisheries (4%). The economic structure has shifted, gradually reducing the proportion of agriculture-forestry and fishery sector and increasing the industry-construction and services sectors (up to 33.1%, 22.3% and 44.6% respectively). The percentage of poor and near poor households in Vinh Long city has decreased over the years, at 4.3% and 2.8% in 2016, respectively. There are 3 major ethnic groups living in the city, where the Kinh accounts for the major percentage (99.6%), Chinese accounts for 0.3% and Khmer accounts for 0.1%.

#### D. 2. Borrower's Institutional Capacity

The ODA Project Management Unit (PMU) of Vinh Long province will be the responsible unit in charge of project preparation and implementation. At provincial administrative level, Vinh Long Provincial People's Committee (PPC) and its relevant departments (DOC, DOT, DPI, DONRE, DOCST, DOIC, DARD, DOF) will be playing coordination roles, engaging in various reviewing and approving procedures. Vinh Long City People's Committee (CPC) and its divisions will be providing supports at their areas of responsibility. Through the on-going Bank-financed SUUP (Scaling up Urban Upgrading Project), Vinh Long authorities are familiar with the Bank's Environmental Safeguard policies, procedures and requirements. As this is the first project applying ESF in Vinh Long, some areas in the Environmental and Social Framework (ESF) are new to that Vinh Long authorities, such as labor management, continuous stakeholder engagement (SE) throughout the project life, the production and use of the environmental and social commitment plan (ESCP). Therefore, targeted training and capacity building to deal with these novel aspects of ES risk management will be necessary and carried out during project preparation and implementation. However, the ESF and previous safeguard policies are largely overlapping. Therefore, areas in the relevant aspects of ESS and ESF, where the Borrower may lack of familiarity (e.g. labor, stakeholder engagement, community health and safety, GBV, etc.,) will be identified, and specific support will be provided.

Vinh Long PMU, situated within the province's Department of Planning and Investment (DPI), is currently implementing the early stages of the on-going Vinh Long subproject under the World Bank financed Scaling-up Urban



Upgrading Project (SUUP). The PMU has been provided with the safeguard training courses, and is managing E&S risks under the previous Bank’s safeguards policies. The personnel (including E&S staff) assigned for the SUUP are still limited in terms E&S risk management capacity and experience and have been overloaded with other administration and project management responsibilities. PMU plans to recruit additional staff being in charge of ES standards in the new project, and the training on ESF would be required. Furthermore, the responsibility for land acquisition and resettlement lies principally with the city government units, which may not have the capacity to deliver the land required for the project in a timely fashion. The Bank team also expects a significant increase in Borrower’s demand for continuous support in E&S risk management during preparation and implementation, as compared to the previous safeguard policies, and anticipates that this will require additional resources and may affect the preparation time.

Considering the new ESF requirements and the PMU’s limited E&S capacity, an ESF capacity needs assessment shall be undertaken more systematically during project preparation to analyze the Borrower’s and other implementing agencies’ capacities and to identify opportunities for strengthening and enhancing coordination. This needs assessment will be a joint effort between Vinh Long PMU and the Bank team, and could include the activities related to E&S management such as identification of key tasks for E&S risk management (especially new aspects of the ESF’s requirements); identification of relevant institution and actors involved in implementation (this will include key agencies involved in implementing the regulatory framework); analysis of institutional arrangements and links; assessment of individual institutional capacity (e.g. past performance and current capacity); recommendation of actions to strengthen and monitoring institutional capacity during implementation. The recommended capacity development actions emerging from this needs assessment will be incorporated into the proposed project’s Environmental and Social Management Plan (ESMP), as appropriate.

**II. SCREENING OF POTENTIAL ENVIRONMENTAL AND SOCIAL (ES) RISKS AND IMPACTS**

**A. Environmental and Social Risk Classification (ESRC)**

Substantial

**Environmental Risk Rating**

Substantial

The project environmental risks and impacts would mainly be related to the implementation and operation of the investments under Component 1, 2 and 3. The typology of investments included rehabilitation and improvement of existing drainage system, construction of sewers and a wastewater treatment plant, embankments, sluice gates, pumping stations, water retention structures, urban roads and a resettlement site. These moderate scale physical infrastructure investments will be implemented in urban and semi-urban areas. This implies an environmental baseline with low sensitivity that is characterized by varying degrees of modification, ranging from complete surface sealing and absence of vegetation to highly modified patches of intra-urban habitats.

The bulk of anticipated impacts would be related to construction works and include common risks such as dust, noise, vibration, generation of solid wastes and wastewater, water quality reduction, localized flooding and related unhygienic conditions, disturbance to landscape; interruptions to public services and infrastructure, traffic and traffic safety issues, loss of some trees, vegetation cover and benthic species, health and safety risks to workers, etc. Most of these are mostly temporary, at low to moderate level and reversible, however, some incremental disturbance and safety risks to the affected parties in urban and semi-urban areas when construction activities are carried out parallelly with those under the SUUP. In addition, there are also other specific risks and impacts related to the location and typology of investments such as safety risks related to UXO left from the war which ended in 1975,

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damages to existing weak structures due to dredging or piling, serious pollution from improper handling, storage and disposal of dredged materials, localized flooding, nuisance and visual impacts. The main risks and impacts during operation would be permanent changes in land use and elevated local ground elevation at and/or along the new roads. The new roads may cause access disruptions and community fragmentation, change drainage patterns, or increased traffic safety risks. These could result from poor planning/design and inadequate stakeholder consultation and engagement during project preparation and implementation. Induced development such as new residential and commercial structures along new/improved urban roads would be expected, however, with low to moderate impact within an existing urban zone. Regarding wastewater system operations, there are pollution risks due to failures at the pumping stations and treatment plant. While the capacity has not been confirmed, the level of GHG emissions depends on the treatment technology and processes. This will be determined during the detail design phase. Changes in landscape, disrupted access to water fronts from river/canal side, pollution and localized flooding may also be issues related to canal and river embankments construction and operation.

The PMU has limited environmental management capacity as existing staff do not have experience in projects applying ESF. Meanwhile, while at the same time they are also managing a Bank-financed SUUP subproject which has to comply with the Safeguard Policies. Therefore, there is a risk that the resources allocated for managing environmental and social issues of this Project may not be adequate, affecting the environmental performance/compliance to the ESSs of both projects. However, there is also an opportunity to encourage to hire qualified ES staff and pool resources for various projects.

Given the potential environmental impacts and risks, combined with some uncertainties on institutional capacity as discussed above, the project's environmental risks are classified as substantial at this stage.

**Social Risk Rating**

Substantial

Overall, the project is expected to have a positive social impact. By improving access to infrastructure and reducing flood risk in the urban core area of Vinh Long city, and increasing the connectivity, the project will improve the living conditions of their poor and vulnerable residents, as well as their accessibility to jobs and public services while reducing vulnerability flood related risks.

The project footprint currently can only estimated, as the pre-feasibility study is still under preparation. Potential social risks and adverse impacts include (i) land acquisition from an estimated 3,000 PAHs, of whom roughly 500 may have to be relocated or resettled within their existing land plot; (ii) the loss of agricultural land, affecting farmers' livelihoods; (iii) loss of assets affixed to lands, commercial and other properties; (iv) possible additional land acquisition, under city financed domestic projects, along the proposed extended Vo Van Kiet street, and along the urban main roads for future development may lead to a perception that these are associated with the World Bank financed project; (v) relocation of graves; (vi) the risk that city government units responsible for land acquisition and resettlement may not have the capacity to deliver the land and the resettlement site required for the project in a timely fashion, (vii) the risks and impacts on community health and safety due to construction works (wastewater, dust, noise) and operation (traffic accidents), and related risks from the influx of labor to low income project areas, characterized by poor and vulnerable residents, during construction (e.g. Gender-based violence, sexual exploitation and abuse, and the spread of sexually transmitted and communicable diseases); (viii) increase of conflict between users in wastewater discharge connection; and (ix) uneven access to project benefits among vulnerable groups such as poor households and female headed households.



In terms of resettlement impacts, under component 1, investments related to drainage improvement will result in limited and temporary socio-economic impacts, as it will take place mainly within the footprints of existing infrastructure. Also under component 1, the resettlement impacts related to waste water collection planned (including the construction of a WWTP) will be limited (estimated 100 HHs affected by land acquisition, including 15 HHs to be relocated), as most of the works will take place on public land. The Flood control system works planned under component 1, particularly the upgrading of canals/embankment, may lead to significant resettlement impacts (around 1,000-1,200 HHs affected, including 350 HHs to be relocated). In particular, livelihoods may be affected along the densely populated canals (i.e. 3km-long Long Ho canal). Under Component 2, four new roads will be constructed (18km long and 30 to 42m wide) through mainly agriculture land requiring significant land acquisition (estimated 1,200-1,400 HHs will be affected, including and around 100 HHs to be relocated). Component 3 will require the acquisition of 11 ha of agricultural land (160 HHs), which will also have permanent economic impacts.

Vinh Long PMU is managing the on-going SUUP and while familiar with the Bank safeguard policies, has no experience in preparing and implementing a project under the ESF. The project counterparts will need to familiarize on new content and concepts of the ESF, especially the new social risk management requirements (related to labor and working conditions, non-discrimination, community health and safety, cultural heritage, and stakeholder engagement). Furthermore, the responsibility for land acquisition and resettlement lies principally with district government units, who may not have the capacity to deliver the land required for the project (including resettlement sites) in a timely fashion.

## **B. Environment and Social Standards (ESSs) that Apply to the Activities Being Considered**

### **B.1. General Assessment**

#### **ESS1 Assessment and Management of Environmental and Social Risks and Impacts**

##### ***Overview of the relevance of the Standard for the Project:***

The team reviewed the PCN, provincial environmental status report 2010-2015 and Masterplan on Biodiversity Conservation 2015-2020, draft Updated City Masterplan, Vinh Long SUUP ESIA and conducted field work before finalizing the ESRS. The Project's overall potential impacts would be positive with improved access to infrastructure and reduce flooding risks in the core urban area of Vinh Long city. The potential adverse socioenvironmental risks and impacts would mainly be associated with the investments proposed under Components 1, 2 and 3 as discussed in ESRC section.

There are also the risks of inadequate coordination among implementing agencies at provincial and sub-provincial levels. Although the potential impacts/risks of the proposed project are diverse, they are manageable and could be mitigated/compensated through appropriate ESA and mitigation plans to be developed during the project preparation or implementation. The ESA will include requirements for screening for these risks, as well as assessing and mitigating their impacts of project activities.

The Borrower will prepare an Environmental Social Commitment Plan (ESCP) and Environmental and Social Impact Assessment (ESIA) including an Environmental and Social Management Plan (ESMP) in accordance with ESS1. The ESCP will set out the activities to be carried out and during project preparation and implementation and could be adjusted during the project life keeping with the evolution of E&S risk and impacts. The ESIA will describe institutional framework, the project and baseline conditions, identify and assess the potential environmental and social impacts



and risks, and propose mitigation measures. The ESIA will identify and assess the potential direct, indirect and cumulative E&S impacts and risks in the project life cycle, from pre-construction, construction and operation phases. Common construction impacts and risks and type/location-specific ones will be considered at construction sites and areas of influence. For component 1, assessment will also cover the land areas in the corridors behind the boundary of land acquisition along rivers, canals where accessibility of local residents, drainage, structural stability may be affected. Particularly, ESIA will also cover temporary storage and disposal sites of dredged materials with attentions paid to leakage water, drainage, and slope stability. Regarding the WWT system, assessment will cover the serviced area in which communities will be disturbed significantly by pipeline works, the WWTP site and its buffer zone which will be affected by construction impacts and emissions during operation phase, the receptor of the WWTP's effluent which is the Co Chien river (the area at the WWTP's outlet, downstream and immediate upstream as dual flow does exist sometimes due tidal effects) in which water flow and water quality, waterway traffic and existing/planned water users and dischargers would be affected. For component 2, ESIA considerations will cover the corridor along the proposed road alignments which will be affected by land acquisition, construction impacts and traffic safety risks and drainage and accessibility disruption during operation phase. Access roads to construction sites, camp sites and other ancillary sites such as batching plants (if any known at ESIA stage) will also be covered. For component 3, the ESIA will cover the resettlement sites and the corridor along the access road, if any. Mitigation hierarchy (avoid, minimize, reduce, and compensation/off-set) and other guidance in relevant ESSs will be applied when proposing the mitigation measures which can be proposed for various stages of project life. For example, siting of road alignments should avoid existing structures including residential houses (if resettlement didn't provide any direct development opportunities) and sensitive features such as cultural/historical sites, army base, etc. The application of nature-based solutions approach as explicitly stated in component 1 descriptions in the previous section would help to minimize the potential impacts on rivers/canals-side vegetation. It is noticeable that the ESIA should include environmental recommendations for the feasibility and/or engineering design in order to promote good environmental practices and address some construction or operational impacts. For example design of drainage and WW collection systems (particularly the number of pumping stations), selection of treatment technology and processes for the WWTP should take into account emission (gases, effluent and sludges), working conditions of the system operators and power consumption levels during operation phase of the plant. The design of the WWTP will be reviewed to ensure the buffer zone, around the facility, is adequate to protect existing/planned residential areas and other sensitive zones. Labor management and stakeholders engagement will also be prepared and reflected in the ESIA/ESMP. With three types of investments (WW pipelines, WWTP, and roads), the ESMP will contain three separate sections, each presents specific mitigation measures for each type of investments during construction and operational phases. Mitigation measures will be incorporated into construction/operational contracts. The ESMP will set out the arrangements for the implementation of the proposed mitigation measures, monitoring and supervision as well as reporting requirements, capacity building and training, and cost estimation. The ESMP will require the contractor(s) of each construction package prepare Contractor's ESMP (C-ESMP) to cover ECOP for addressing common construction impacts and relevant specific mitigation measures.

A grievance redress mechanism will also be developed to provide guidance on the reception, recording, handling, and reporting of complaints that may be encountered during project implementation. The World Bank EHS Guidelines will also be applied when developing ESA instruments. Consultation during the preparation of ESCP, ESIA/ESMP and other ES tools and disclosure of these documents will be carried out in accordance with the ESS10.



By Project appraisal, the Borrower will develop: (i) a draft stakeholder engagement plan (SEP); (ii) a draft RPF to be updated from the RPF available for SUUP; (iii) a draft RAP for identified investments, (iv) a draft CUP (if relevant); (v) a draft GBV/SEA action plan, and (vi) a project level GRM (based on existing procedures). Safeguard documents will be disclosed locally, and revised as needed. The approved documents should be submitted to the Bank for disclosure.

**Areas where “Use of Borrower Framework” is being considered:**

Although Vietnam has an advanced E&S Framework, there are gaps between the environmental and social assessment regulation and practice, especially in description of the environment, level of impact analysis and mitigation measures, and public consultation and disclosure of information. In addition, there is no experience of the implementing agencies in implementing and applying ESF and its associated environmental and social standards. Therefore, there are no plans to use the Borrower’s E&S Framework within this project.

**ESS10 Stakeholder Engagement and Information Disclosure**

The project’s key stakeholders include the project implementing agency, relevant authorities at provincial, city and ward levels, consultants, construction contractors, WWTP operators, and local residents. Interested parties include the Vinh Long ODA Project Management Unit (PMU), provincial authorities and branches (PPC, CPC, WPCs), the agency responsible for monitoring and management of environment and natural resources (DONRE), the agency responsible for monitoring and management of irrigation and flood risk management and natural disasters (DARD), the agency responsible for urban planning and construction management (DOC), the department of transport (DOT) is responsible for planning, design and maintenance of transport system, the department of information and communication (DOIC) is responsible for ICT smart city framework, the department of culture, sport and tourism (DOCST) is responsible for tourist attraction and planning, and the Urban Public Works Companies (waste water and drainage, water supply, lighting, etc.). In addition, the Provincial Committee for Flood and Storm Control (CFSC) has a mandate to coordinate flood management and emergency response. There is a need to strengthen coordination of these fragmented institutional structures and consolidate the operations and maintenance strategy as part of an integrated flood management system. Also, collaboration with local administrations will be crucial for ensuring project management and implementation to required standards. In addition, other interested parties include mass media, research institutes/academies, local/international NGOs and development partners (ADB) working in the same area, mass organizations such as the Fatherland Front, the Women’s Union and the Farmer’s Union, and private businesses. The Bank team is currently discussing about a potential co-financing opportunity for selected investments related to wastewater collection and treatment under Component 1 with the DRIVE program being implemented by the Netherlands Enterprise Agency (RVO), on behalf of the Minister for Foreign Trade and Development Cooperation of the Netherlands.

Of the key stakeholders who are affected parties, of primary concern are the poor/disadvantage affected households that make up the residents of the low income areas likely to benefit by the project, but also who are likely to be most affected by the works. The Bank team will collaborate with the Borrower in identifying “disadvantaged or vulnerable” project-affected individuals, or groups during stakeholder identification and analysis. A stakeholder engagement plan (SEP) will be developed for this project to ensure transparency and meaningful consultation with the affected and interested parties. Stakeholder engagement and consultations will be conducted throughout the project cycle. To support Vinh Long PMU on the implementation of ESS10, the Bank team has shared with the client the Guidelines for Borrowers on the preparation of SEPs, and template. Regarding public disclosure, the E&S instruments will be prepared and disclosed locally and made available in the Borrower’s website and Bank’s external portal.





For component 1, the beneficiaries should be in particular consulted on: (i) choice of the optimal options for the project roads alignment; (ii) choice of options for the engaged at early stage of tertiary sewer design of the plan for household connection. Local residents should be invited to discuss on the proposals for inner city canal embankments (width of site clearance); (iii) layout of the Resettlement Area; (iv) selection of process used for the WWTP and the impacts on the surrounding areas; (v) locations of camps and storage areas; and (vi) timing of the possible additional land acquisition along the Bank financed project roads. Consultation will take place in particular improvements and their commitments protecting the improved canals during the operation.

Gender-segregated consultations will also be conducted. The different needs for women and men (e.g., differentiated travel patterns, perception of safety, and universal access intersection design principles) should also be consulted with both local authorities (particularly DOT, DOC) and local residents. In construction phase, the contractors would be required to carry out consultation with local authority and residents on siting the worker's camps. As the city's masterplan oriented Vinh Long development toward green city for tourism, DONRE and DOCST should be engaged in the design of relevant infrastructure such as bridges, canal/river embankments etc. Where relevant, Community Upgrading Plans (CUP) will be also prepared, before appraisal, in collaboration with the community, and will feed into the preparation of the ESIA. The SEP, along with other social and environmental instruments, will be subject to public consultation and disclosure per requirements of ESS10, and will be treated as a live document, to be regularly updated during project implementation. A project-wide Grievance Redress Mechanism (GRM) will be established in coordination with localized grievance redress processes in order to ensure that concerns are captured and addressed by the Project Management Unit. The existing GRM is the already-established mechanism embedded in all administrative levels (e.g. one stop shops at the ward and community level, and inspectorates at the city level), as well as and the people's courts. This mechanism functions well in dealing with issues such as adjudicating land boundaries (at the commune level) or resolving the EHS impacts related to constructions. However, they can be less effective in addressing concerns related to compensation for land acquisition required by the project, or the allocation of resettlement plots. The project GRM will build on, and coordinate, these mechanisms to ensure that concerns are captured and addressed in a satisfactorily and timely manner. The SEP, GRM, ESCP and other relevant tools will be disclosed in a timely manner, in an accessible place, and in a form and language understandable to project-affected parties and other interested parties as set out in ESS10, so they can provide meaningful input into project design and mitigation measures.

## **B.2. Specific Risks and Impacts**

**A brief description of the potential environmental and social risks and impacts relevant to the Project.**

### **ESS2 Labor and Working Conditions**

The Project workforce will include direct workers (directly employed by PMU), contracted workers (recruited by third parties such as contractors or as consultants), and primary supply workers. The project is not likely to engage community workers, as civil works will be the responsibility of contractors. Overall, the workers in Vietnam have been managed and protected under a relative comprehensive labor framework including the Labor Law (2012), the Law on Occupational Health and Sanitation (2015), the Social Security Law (2014). The policies and regulations stated in this legislation reflect the principles of ESS2 on issues such as fair treatment, non-discrimination and equal opportunities to workers, support the rights and benefits of the workers, recognizing workers' rights to establish or join





associations of workers, prohibition on sexual harassments/forced labors/child labor (under 15), etc. As the PMU is a government entity where laws and regulations have been followed, trade unions and official grievance redress mechanisms exist, minimizing risks related to ESS2 for direct project workers are foreseen.

With contracted workers, the majority (estimated at 200-250 workers during peak period) would be hired by construction contractors, many of them may come from other localities. The main risks would be about health and safety at both construction sites and site accommodations where the workers are near or operating with construction machinery and equipment, and possibly some hazardous/flammable materials. Other risks relate to access to safe drinking water, power supply and sanitation facility is limited. Health and safety risks management performance of small contractors are usually weaker than the bigger ones. The ESMP will include a set of measures for managing these health and safety risks at both construction sites and worker's accommodation. Although the number and characteristics of contracted workers can only be estimated after construction contract signing, the risks about discrimination, forced labors or child labor in the project can be considered to be very low based on the experience of past projects in the Mekong delta region. Nevertheless, a labor management procedure adequately covering the aspects discussed in ESS2 need to be developed, enforced by inclusion into bidding documents for implementation and monitoring. These procedures will set out the way in which project workers will be managed in accordance with requirements of national laws and ESS2. These procedures will include measures related to nondiscrimination in the recruitment and treatment of direct and contracted project workers. The ESMP will also include measures to avoid and prevent potential hazards to workers under an OHS management plan (OHSMP) which ensure that all applicable health and safety legislation and the requirements set out in ESS2 and relevant sub-sections of the World Bank Group General EHS Guidelines are met during the construction and operation phases of the project. As part of each contractors' C-ESMP, an OHSMP will also be prepared to include: (i) an occupational health and safety, communication and training program; (ii) provision of organization charts; (iii) safety regulations, responsibilities, accident and incident response and reporting, use of personal protective equipment (PPE), fire prevention measures, fall protection and emergency preparedness; (iv) first aid and emergency response and transfer during construction. Furthermore, the construction supervisors will be responsible for support services will ensure that all sub-contractors adhere with the project OHSMP and report incidents and accidents as well as non-compliances in timely manner. The Borrower will require the O&M contractor to develop, implement and maintain the OHSMP to ensure that all applicable health and safety legislation and requirements set out in the ESS2 and relevant sub-sections of the World Bank Group General EHS Guidelines are met during the operation. The borrower will develop, and where relevant include in the bidding documents, requirements for (ii) a worker's Grievance Mechanism (GM) which could address all workers complaints; and (iii) sensitization related to the availability of worker's Grievance Mechanism (GM) and to the respect of code of conduct to prevent and address potential harassment, child labor, gender or GBV/SEA issues, intimidation and/or exploitation during the implementation of the activities financed under this project. The labor management procedures will include assessment of OHS risks and impacts related to project activities as they are defined through preparation and proposed measures to manage those risks – in parallel with project ESA instruments.

The main primary supplier of the project would be sand suppliers as stones and other construction materials would be bought from suppliers in Vinh Long or other provinces. The number of project primary workers is expected to be limited, with much of the work being done mechanically. Due diligence review on labor and working conditions of primary suppliers will be done as part of ESIA. Furthermore, ESS2 monitoring requirements, included in the ESMP, will also cover primary supply workers.



### ESS3 Resource Efficiency and Pollution Prevention and Management

The project includes three main types of investments which includes drainage, a wastewater collection and treatment system, and the ring roads, construction of these works will have some common impacts and risks such as dust, noise, vibration, generation of solid wastes and wastewater etc.. Such impacts and risks would affect ambient environmental quality and/or human health thus will be identified and assessed in the ESIA with focus given on sensitive receptors such as medical centres, schools, populated residential centres near the construction sites. The Project's ESMP will propose site-specific mitigation measures to address the common construction impacts at sensitive locations in addition to the readily available measures for addressing common construction impacts, i.e. the Environmental Codes of Practices (ECOP) and Workers' Codes of Conduct. These measures will be incorporated into construction bidding/contractual documents and C-ESMPs for implementation by the Contractor.

In addition to such common construction impacts and risks and mitigation approach, type-specific issues with regards to resource efficiency and pollution prevention and management will also be discussed and managed through the ESA process. Particularly, the construction of the wastewater treatment system (WWTS) would require significant volume of materials (soil and sand) for ground levelling. The ESIA will quantify the materials demand and the ESMP will include the measures to manage the potential environmental impacts related to the exploitation of such filling materials, to the extent controllable by the Project, for example only accept materials from the licensed suppliers/sand mine/borrow pits. WWTS operational concerns would be: (a) impacts on water quality at the receptor by the treated effluent; (b) energy consumption level for pumping and WWTP operations; (c) materials used, gas emissions and system failure risks during operation phase of the WWTP. To address such potential impacts and risks, the Vietnamese National Technical Standard on Municipal Wastewater QCVN14-MT:2015/BTNMT issued by MONRE will be applied in designing the WWTP, such application will be in line with ESHG on Water and Sanitation. Energy-saving in relation to WWTS operations would be achievable through system design and application of alternatives (e.g. minimise energy consumption on pumping by maximizing the use of ground gravity, greening the WWTP sites and office building to save electricity on air condition etc.). For pollution control and risk management during its operation, the Pre-FS/FS will determine the siting and land area of the WWTP with adequate buffer zone in compliance with applicable national standards. Depending on the results of impacts and risks assessment, WWTP system design may include the gaseous (particularly the odour-generating gases such as H<sub>2</sub>S) collection and system and standby treatment tank capacity to reduce the level of impacts and risks in case of system failure. As part of the construction contracts, O&M Manuals for the operation of the WWTP system will also include sludge treatment unit and/or procedures for the handling, temporary storage, transportation and final disposal of the material used for wastewater treatment sludge that are environmentally sound and safe to human health (both the workers and the potentially affected communities).

During operation phase, while the volumes of GHG emitted from the proposed WWTP will depend on the chosen treatment technology and processes which is yet to be determined, it is expected that GHG emission from wastewater treatment processes in the WWTP would be less than the case of "without project" where wastewater is not collected and GHG would be released from the stagnant water at many places within and surrounding residential areas. In short, as GHG emissions from this project will be small and dispersed, thus the team proposes NOT to undertake GHG accounting for this project.



With drainage system, the main concerns would be during construction phase as there will be some dredging activities. Odour, visual impacts, soil and water pollution due to dredged materials and leakage water could be issues caused by dredging, temporary storage, handling, transportation and final disposal of the dredging materials. The ESMP will include a Dredging and Dredged Material Management Plan (DDMMP) will be prepared to: (i) characterize the dredged materials qualitatively and quantitatively; (ii) identify and assess the potential impacts and risks associated with all stages of the dredging process; (iii) propose mitigation measures which may include dredging methods and design of the temporary and final disposal sites; and (iv) monitoring plan. The costs associated with the mitigation measures applicable to dredging process will be incorporated into the Project costs. Based on the DDMMP, after contract signing the contractors of relevant bid package will also prepare C-DDMMP detailing the mitigation measures and monitoring activities applicable to their package. The ESMP will also consider opportunities for beneficial use of the dredged materials such as ground levelling or tree planting provided that the quality of materials is suitable for such purposes.

For the ring roads, with better road surface conditions and less traffic on the urban roads, vehicles can maintain more stable speed thus emissions from exhausted will be less than the case of travelling on the other roads if “without project”. With limited length of the roads to be constructed, the net GHG emission along these roads is anticipated to be small and dispersed. Meanwhile, there are also existing national regulations for vehicle emission control such as the “National Technical on the fourth level of gaseous pollutants emission for new assembled, manufactured and imported automobiles QCVN 86:2015/BGTVT issued by the Ministry of Transport.

#### ESS4 Community Health and Safety

The aspects of community health and safety that need to be considered include waterway and roadway traffic safety in disturbed areas, community health issues and safety risks at the construction sites, hazardous substances related to the operation of the WWTP, and social security including GBV/SEA related to the influx of workers and security personnel. These risks and issues will be assessed during the ESA process and mitigation measures will be developed and incorporated as part of ESMP for application during detail design, bidding, construction or operational phases. The engineering design will apply 100 years repeated waters to structural flood control such as a closed “ring” embankment with tidal sluiceways/valves to protect areas from high water on the edge of rivers and will use 10 years rainfall returns for urban drainage. The design of these flood control measures (which may also include retention ponds) would incorporate design features that minimize waterfowl, mosquitoes, and safety features (especially for children, disable/aged people). Discussion would also be held with municipal government to set aside necessary resources for maintenance and inspection of the structural flood control measures. Regarding traffic safety, the ESIA/ESMP will identify, assess and monitor the risks related to traffic and traffic safety risks that would affect local communities and travelers. Mitigation and risk management measures will be incorporated into the design of roads and the intersections, and cost estimation. Measures to enhance traffic safety in relation to the vehicles used by the Project during construction and operation phases will also be proposed. Other measures to minimize the safety risks for traffic means, drivers and local residents will also be proposed for the cases where road surface is occupied or disturbed by project activities. In relation to community health issues and safety risks, the ESIA/ESMP will consider the treatment process and the requirements regarding the buffer zones of the WWTP and the design of the works will be compliance with applicable national design and construction codes taking into account the potential impacts of climate change, and with reference to ESHS and GIIP in order to ensure safety for community and stake holders during the construction and operation of the WWTP. The ESIA/ESMP will also considers the



incremental safety risks when the public is using the footpaths and the application of universal access in the design of the footpaths and along the new roads including those within the resettlement site. About community health and safety risks related plant operation, while the use of highly toxic substances in the WWTP operation is not likely, the ESIA will identify and assess health risks of the pollutants emitted from and the chemicals used for wastewater treatment, and ESMP will include recommendations on the size of buffer zone and Emergency Responsive Plan will be prepared as part of the WWTP's operational manual. The construction of the WWTP may require the use of some security personnel. ESIA will assess risks posed by these security arrangements to those within and outside project site and the ESMP will include the measures to avoid, mitigate the identified risks in accordance with ESS4.

Civil works may result in the presence of workers from other localities the project area. Depending on the scale of each subproject, a moderate number of workers (200-250 workers) will be required for construction sites. This has the potential to result in impacts to community health and safety. Gender-based violence (GBV), sexual exploitation and abuse (SEA), and the spread of sexually transmitted and communicable diseases, may occur especially among vulnerable populations in in the Low income areas. During preparation, the project should (i) undertake a mapping of service providers and assess the capacity and quality of these services for the survivors, (ii) assess the ability of the client to respond to GBV risks, (iii) assess the risk of GBV for the project, (iv) establish procedures to review and update risk assessments during project implementation, (v) identify and include appropriate mitigation measures for including in the project design and bidding documents (including worker codes of conduct). In addition, efforts will be made to manage the potential labor influx by developing a labor influx management strategy to be included in the ESA. Furthermore, any private security to be retained by the PMU and Contractors will be unarmed, registered and trained (this requirement will be specified in the bidding documents).

#### **ESS5 Land Acquisition, Restrictions on Land Use and Involuntary Resettlement**

The proposed project will include a combination of structural and non-structural interventions to improve access to infrastructure and to reduce flood risk in the urban core area of Vinh Long city. Considering the scope of the infrastructure to be developed in the Component 1, 2, and 3, significant land acquisition may be required, leading to the loss of lands, relocation of households, permanent economic impacts, and restrictions to access to livelihood activities. There may also be land acquisition requirements associated with the disposal of sludge and construction materials leading to a permanent loss of crops, trees and land-affixed assets. Permanent acquisition of residential, garden, agricultural, water surface areas and the permanent disruption of business activities will be required. There is also a risk of temporary restrictions in access to residential and commercial establishments, which could affect people's livelihoods, and temporary land acquisition is also possible.

The land acquisition requirements, household relocation, and impacts on livelihoods have the potential to be significant. The initial assessment indicates that there are around 3,000 households will be affected land acquisition, of which roughly 500 households may have to be relocated or resettled within their existing residential plots. Under Component 1, it is estimated that impacts would include 100 HHs affected by land acquisition for the WWTP (including 15 HHs to be relocated), and up to 1200 HHs affected by land acquisition for canal upgrading (350 HHs to be relocated). For component 2, it is estimated that up to 1200 HHs will be affected land acquisition for road construction (100 HHs to be relocated), while under component 3, 11ha of agricultural land will be acquired from 160 HHs to construct a resettlement site. At this point it is not possible to estimate temporary economic impacts that may result from the relocation of businesses vendors affected during the construction phase of component 1.



The development of Resettlement Site (11 ha) in Ward 8, under the Component 3, will be located close to affected areas and connected with the other urban areas, where current the land use is agriculture, and no residential structures are currently located. Based on initial assessment, the RS will have a capacity of over 500 plots (100-120sqm per plot). Considering that relocated HHs can choose to self-relocate, it is expected that the proposed resettlement site will cover the needs of HHs wanting to be relocated in a serviced resettlement site. Additional acquisition of land along the proposed new Vo Van Kiet Road and along the Ring Roads for future development, under city financed domestic projects, may also take place in the future. Even if these parallel projects are not considered as associated facilities, experience from other projects show that there are challenges and risks if two different resettlement policies (World Bank and Government) are applied for the Banks's project and for City's projects (primarily due to residents not distinguishing between the two sources of financing). Under the Component 1, there are 4 LIAs that will be upgraded. Under the SUUP, Community Upgrading Plans (CUP) were prepared in collaboration with the community living in LIAs. CUPs are based on extensive community consultations and social surveys to identify priority investments in each LIA. Where relevant, the same approach shall be applied to ensure acceptance of the project and to enhance ownership by the community for the project. Some sections of canals, where embankments will be upgraded under Component 1, are densely populated. Households along these canals have LURC, permanent houses and generally stable livelihoods.

Efforts will be made to avoid or minimize the potential land acquisition or involuntary resettlement during the subproject identification through the use of environmental and social screening tools in conjunction with early stakeholder engagement activities. Legacy issues were identified for the WWTP location, where land acquisition was already conducted 10 years ago and some issues remain unresolved including disagreement and unwillingness to accept compensation for agricultural land by a number of PAPs. A Due Diligence report on this land acquisition will be required from the client before appraisal. During the preparation of the project documents, if additional legacy issues are identified, a due diligence report will also be required. At this stage, only rough estimates are available regarding the project footprint and the scale/scope of impacts, therefore, a Resettlement Policy Framework (RPF) approved for will be prepared. The RPF which was prepared under the SUUP will be (Vinh Long is one of the participating cities), will be and updated according to the project features, and the requirements of the ESF, and will be ready prior to project appraisal. The RPF will include provisions to provide compensation for the entire cost, relevant to customary requirements for the relocations of graves. Once the detailed designs are available, a Resettlement Action Plan (RAP) will be developed. The RAP will need to take into account the socioeconomic vulnerability of the affected population to avoid the risk of impoverishment, particularly among the people who do not hold property titles to the land they occupy, ensuring that the mitigation measures are adequate to restore their living conditions, including the analysis of options beyond cash compensation. Given there is a risk of restrictions in access to residential establishments and business activities, which could affect people's livelihoods, the RAP will include a livelihood restoration plan.

### **ESS6 Biodiversity Conservation and Sustainable Management of Living Natural Resources**

Overall, the environmental baseline is characterized by a low sensitivity with varying degrees of modified habitats, ranging from complete surface sealing and absence of vegetation to highly modified patches of intra-urban habitats. The existing urban green space in Vinh Long city mainly includes small parks and trees planted along streets. There are acacia and eucalyptus plantations near the residential centre and narrow natural vegetation patches left, having some recreational rather than biological values. Among the limited native tree species planted in Vinh Long city (Đầu



rái (*Dipterocarpus*), sao đen (*Hopea odorata*), thị (*Diospyros mollis*), Viết (*Minusops elengi*), Bằng Lăng (*Lagerstroemia speciosa*), the Sao Den is in IUCN's protection list. In addition, seven introduced invasive floral species, typically grasses, water-hyacinth and mimosa, have been found in Vinh Long city. The number of fauna species observed in Vinh Long is limited, mostly spiral (*Callosciurus*) and flying-foxes. There are also 18 bird species, 10 reptiles and 3 amphibians. At the provincial level, 117 fish species have been identified. Although the potential impacts on fish is likely to be limited as dredging would take place in dry season at inner city canals, the potential impacts on the aquatic and land-based habitats in and around Vinh Long city will be assessed. While the exact location of some work items including the proposed WWTP has not been determined or confirmed at this stage, primary site survey found that some sections of the proposed road alignment would run through existing agricultural/ vacant land in the city. Canal improvement may disturb existing embankments where there may be some patches of vegetation cover. The project's excavation and dredging works may affect existing green space, vegetation cover and trees, birds and aquatic lives. During project preparation, the project will identify and assess such impacts in accordance with ESS6. The ESA will include measures to avoid, mitigate, minimize or compensate for the disturbance or negative biological impacts through the siting of the works, engineering design or construction practices. Meanwhile, the project will review and implement measures to meet applicable requirements of the Province's Biodiversity Conservation Masterplan (BCM), if any. In addition, the project also has opportunity to support the province's BCM implementation, e.g. planting of protected native trees along the new/affected roads, promoting the maintenance/creation of vegetation cover along the improved canals etc.

A cumulative impact assessment would be conducted to inform of the selection the siting and form of structural and non-structural flood control measures. That assessment would take into account the potential hydrological changes, nutrient loading, pollution and incidental take, as well as project climate change impacts (ESS6, paragraph 8).

#### **ESS7 Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities**

An initial screening indicates that the project investments will take place within Vinh Long city where the majority Kinh people are dominant (99.6%), the remainders are the Chinese (0.3%) and Khmer (0.1%). Because the Khmer population are made up of individual households, residing in mixed neighborhoods with the Kinh majority, and have no collective attachment to the project area, this standard is not relevant.

#### **ESS8 Cultural Heritage**

There are known existing temples, pagodas and other cultural heritages in Vinh Long city, particularly the nationally-recognized sites namely the Long Thành, Tân Hoa, Văn Thánh, Thất Phủ, Công Thần temples. Siting of the project's proposed works should normally avoid these existing physical cultural structures, therefore the proposed project does not require land acquisition or relocation of any sites with cultural values. The ESIA will screen to identify the cultural resources (including graves and cultural heritage) available within the area of influence of the Project, assess the extent to which the project interventions may cause impacts to these known existing structures so as adequate mitigation measures will be developed and included in ESIA for implementation. The ESIA will also assess whether there are any intangible aspects of cultural heritage that may be affected or disrupted by the project. As the project is expected to involve significant volume of earth works at the WWTP, along the pipeline, new roads and canal, a chance finds procedure will be included as part of the ESMP.





**ESS9 Financial Intermediaries**

At this stage, no financial intermediaries are expected to be involved in the project. Relevance of this ESS will be further assessed during project preparation as part of ESA process.

**B.3 Other Relevant Project Risks**

No other relevant project risks envisaged.

**C. Legal Operational Policies that Apply**

**OP 7.50 Projects on International Waterways**

Yes

The Mekong river is an international water way that enters Vietnam with the two major branches namely the Tien and the Hau rivers. At its lower downstream, the Tien river is divided into two major branches, one of them is the Co Chien river which passes the northern part of the Vinh Long city. The proposed project will build a wastewater treatment plant thus some treated wastewater will be discharged into a receiving water body. Rehabilitation or improvement of existing urban water drainage including dredging activities would generate pollutants into water and may affect river/canal flows. Most major canals and rivers in Vinh Long are connected to the Co Chien River in some ways. Therefore, OP7.50 – International Waterway - will be triggered in this Project. During project preparation, further information will be collected and assessed for determining whether an exception to the notification requirement is applicable. If not, the notification process will be undertaken in accordance with OP7.50 and taking into account the timeline of project preparation.

**OP 7.60 Projects in Disputed Areas**

No

The project will not be implemented in any disputed areas.

**III. WORLD BANK ENVIRONMENTAL AND SOCIAL DUE DILIGENCE**

**A. Is a common approach being considered?**

Yes

**Financing Partners**

The Bank team is currently discussing about a potential co-financing opportunity for selected investments related to wastewater collection and treatment under Component 1 with the DRIVE program from the Dutch Ministry of Foreign Affairs, being implemented by the Netherlands Enterprise Agency (RVO) on behalf of the Minister for Foreign Trade and Development Cooperation of the Netherlands. The co-financing is at very early stage of discussion. Therefore, discussion on a common approach for the assessment and management of environmental and social risks and impacts of the project would be initiated at appropriate time, possibly once co-financing is confirmed.

**B. Proposed Measures, Actions and Timing (Borrower’s commitments)**

**Actions to be completed prior to Bank Board Approval:**

Actions to be completed prior to Appraisal:

- Complete a draft Environmental and Social Commitment Plan (ESCP) and Labor Management Procedures (LMP)

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- Complete a draft Stakeholder Engagement Plan (SEP)
- Complete a draft Updated RPF (based on the one prepared under the SUUP)
- Complete a draft ESIA/ESMP
- Complete a Due Diligence Review for area where legacy issues remain unresolved (i.e. location of the WWTP)
- Complete a Community Upgrading Plan, if relevant
- Confirmation on common approach for the assessment and management of environmental and social risks and impacts, if applicable

Actions to be completed prior to Bank Board Approval:

- Complete final ESCP, Updated RPF, final ESIA/ESMP
- Complete final the Stakeholder Engagement Plan (SEP)
- Complete the final Labor Management Procedures (LMP) and Grievance Mechanism for project workers
- Complete the final Environmental and Social Commitment Plan (ESCP)

Prior to project appraisal, the draft ESCP, ESIA, SEP, RPF, LMP, LMP will be disclosed in places accessible to the public to meet the requirements set out in ESS10.

Prior to Board Approval, the final versions of these document will be re-disclosed.

**Possible issues to be addressed in the Borrower Environmental and Social Commitment Plan (ESCP):**

- Commitment to prepare the relevant instruments per Environmental and Social Standards (ESSs') requirements, and RPF and Due Diligence before appraisal
- Commitment to finalize the relevant assessments and instruments per Environmental and Social Standards (ESSs') requirements (e.g. RAP, LMP, by Board Approval)
- Adequate allocation of resources (human, finance) for application/implementation of ESF, ESSs and relevant instruments
- Commitment to prepare and implement a capacity build plan with strong focus on application/implementation of ESF, ESSs and relevant instruments
- Develop and Implement a Project Level Grievance Redress Mechanism (GRM)
- Development of a detailed GBV/SEA Action Plan

Development of chance find procedures to be made available for all contractors involved in the implementation of the infrastructure related subprojects this will be part of the ESIA.

**C. Timing**

**Tentative target date for preparing the Appraisal Stage ESRS**

01-Dec-2019

**IV. CONTACT POINTS**

**World Bank**

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Public Disclosure



**Borrower/Client/Recipient**

Borrower: Socialist Republic of Vietnam

**Implementing Agency(ies)**

Implementing Agency: ODA PMU of Vinh Long Province

**V. FOR MORE INFORMATION CONTACT**

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**VI. APPROVAL**

Task Team Leader(s):	Hoa Thi Hoang, Mansha Chen
Practice Manager (ENR/Social)	Susan S. Shen Recommended on 09-Nov-2019 at 09:56:23 EST
Safeguards Advisor ESSA	Peter Leonard (SAESSA) Cleared on 14-Nov-2019 at 17:28:29 EST