

**BINH DINH PROVINCIAL PEOPLE COMMITTEES
COASTAL CITIES SUSTAINABLE ENVIRONMENT PROJECT (CCSEP)**

EXECUTIVE SUMMARY

ENVIRONMENTAL-SOCIAL IMPACT ASSESSMENT

**QUY NHON CITY SUBPROJECT
*(Draft for Consultation)***

October, 2016

**BINH DINH PROVINCIAL PEOPLE COMMITTEES
COASTAL CITIES SUSTAINABLE ENVIRONMENT PROJECT (CCSEP)**

EXECUTIVE SUMMARY

ENVIRONMENTAL-SOCIAL IMPACT ASSESSMENT

QUY NHON CITY SUBPROJECT

(Draft for Consultation)

INVESTOR

CONSULTING UNIT

October, 2016

TABLE OF CONTENTS

CHAPTER 1: INTRODUCTION AND PROJECT DESCRIPTION	1
A. INTRODUCTION	1
B. PROJECT OBJECTIVE AND DESCRIPTION	1
C. BASIS OF LAW, LEGISLATION AND REGULATION	6
CHAPTER 2: BASELINE CONDITIONS IN THE PROJECT AREAS	7
A. NATURAL ENVIRONMENT CONDITION	7
B. ECONOMIC-SOCIAL CONDITION	8
CHAPTER 3: ENVIROMENTAL AND SOCIAL IMPACT ASSESSMENT AND FORECAST	11
3.1. POSITIVE IMPACTS	11
3.2. RISK AND POTENTIAL NEGATIVE IMPACTS	11
CHAPTER 4: ANALYSIS OF ALTERNATIVES	18
CHAPTER 5: ENVIRONMENTAL MANAGEMENT PLAN.....	20
A. PREPARTION PHASE	20
B. CONSTRUCTION PHASE	20
C. MITIGATION MEASURES TO CONTROL POLLUTION DURING OPERATION PHASE	21
CHAPTER 6: PUBLIC CONSULTATION AND INFORMATION DISCLOSURE	22
6.1 ENVIRONMENTAL MANAGEMENT PROGRAM.....	22
6.2. IMPLEMENTATION ORGANIZATION STRUCTURE AND ROLES OF STAKEHOLDERS.....	22
6.3. ENVIRONMENTAL MONITORING PROGRAM	23
6.4. PLAN OF IMPROVING CAPACITY AND ENVIRONMENTAL MANAGEMENT CAPACITY	23
6.5. TOTAL ESTIMATES.....	24
6.6. MECHANISM OF SOLVING COMPLAINTS.....	24
CHAPTER 7: PUBLIC CONSULTATION AND INFORMATION DISCLOSURE	25
A. SUMMARY OF PUBLIC CONSULTATION WITH WARD/COMMUNE PEOPLE’S COMMITTEES AND CONSULTATION WITH DEPARTMENTS AND AGENCIES	25
B. SUMMARY OF PUBLIC CONSULTATION IMPLEMENTATION	25
C. DISCLOSURE.....	26
CONCLUSION, RECOMMENDATION AND COMMITMENTS.....	27
1. CONCLUSION	27
2. RECOMMENDATION	27
3. COMMITMENT.....	27

ABBREVIATIONS AND ACRONYMS

CCSEP	Coastal cities sustainable environmental project
CCESP	Costal cities environmental sanitation project
CSC	Construction consultant supervisor
DOC	Department of construction
DOF	Department of finance
DONRE	Department of natural resources and environment
DOT	Department of transportation
ĐTM	Environmental impact assessment
EMC	Environmental monitoring consultant
ESMP	Environmental-social management plan
EMS	Environmental monitoring system
ESIA	Environmental-social impact assessment
FS	Feasibility study
WB/NHTG	World bank
QCVN	Vietnam regulation
XLNT	Wastewater treatment
NMXLNT	Wastewater treatment plant
CSO	Combined sewer overflow
PS	Pumping station

CHAPTER 1: INTRODUCTION AND PROJECT DESCRIPTION

A. Introduction

1. Quy Nhon is a Central Vietnam coastal city directly under Binh Dinh province. Quy Nhon is 1.060km far from Hanoi capital in the North, 640km from Ho Chi Minh city in the South. Quy Nhon is a political, economic, cultural, scientific - technological and tourist center of Binh Dinh province and the center of the Central Vietnam. The location of Quy Nhon City is shown in Figure 0.1 below.



Figure0.1. Quy Nhon city's location

2. Reflecting the important role that Quy Nhon city can play in Binh Dinh's development and urbanization process, the Government has requested support from the World Bank for infrastructure development and environmental sanitation; resettlement and clearance; technical support and institutional reform. Ending up 2014, Quy Nhon city has its population about 285,543 and are the principal urban center in their respective provinces.

3. Like many cities in the developing world, where urbanization is taking place at a rapid pace, Quy Nhon city is struggling to keep up with rising demand for basic urban infrastructure and environmental sanitation and in urban expansion areas. Due to rapid population in recent years, infrastructure and environmental sanitation condition are not guaranteed. The sewage and sanitation systems are inadequate, some areas in city usually are inundated when downpour occurring such as Hoc Ba Bep area and upstream ditch of Bau Sen lake, solid waste management deficiencies and uncontrolled dumping also and lack of infrastructure for connecting traffic route. Those things affected negatively citizen's health and decreased household incomes so it is very urgent to carry out CCSEP project - Quy Nhon city subproject.

B. Project objective and description

4. The Project's overall objective:

- Ensure controlling floods through rehabilitation of drainage system in the city center (component 1)

- Improve sanitation conditions through construction and development of wastewater collection systems, improvement of the wastewater connections for households (component 1)
 - Solve environmental pollutions caused by wastewater through expansion of the wastewater treatment plant (component 2)
 - improve the solid wastes collection and transport capability (component 3)
 - Reduce environmental pollutions caused by solid wastes through construction of a new municipal solidwaste landfill (component 3)
 - Strengthen facilities and equipment capacity in drainage, sewerage and wastewater treatment management and maintenance, improve solid waste management capacity, train O&M staffs and strengthen institutional organization (component 1, 2 and 3)
 - Contribute to develop and complete technical infrastructures, urban landscapes meeting the city development demands till 2020; and
 - Improve environmental knowledge for the city communities
5. The project's specific objectives:
- Solve the remaining areas regularly flooded in the downtown
 - Build a comprehensive system of primary and secondary storm water/wastewater drainage culverts in the inner city.
 - Upgrade Nhon Binh WWTP's capacity up to 28,0000 m³/n.d
 - Expand Long My landfill's capacity up to 2.7 million m³ (add 01 new cell)
 - Solve environmental pollution by using wastewater collection system (including tertiary wastewater drainage culvert)
6. The CCSEP project – Quy Nhon city subproject include 04 components:
- Component 1. Sanitation Infrastructure
 - Component 2. Environmental Infrastructure
 - Component 3. Compensation and site clearance
 - Component 4. Technical support and institutional reform
7. The total cost of CCSEP project – Quy Nhon city is about US\$55 million as as reflected in Table 1.1 below:

Figure 1.1: Project Financing

Ref.	BASIC ITEMS	COSTS (USD)	FINANCING (USD)				
			%WB	WB		TF	CF
				IDA	IBRD		
I	Component 1: Sanitation Infrastructure						
1.1	Phu Hoa channel	3,925,027	100.00%	3,925,027			
1.2	Bau Sen lake up-stream channel	1,052,208	100.00%	1,052,208			
1.3	Hoc Ba Bep & Tran Hung Dao box-culvert and pipeline system	3,887,398	100.00%	3,887,398			
1.4	Bach Dang stormwater drainage culvert	692,522	100.00%	692,522			
1.5	Tertiary pipeline network	4,979,595	100.00%	4,979,595			
1.6	School sanitation	570,869	100.00%	570,869			
1.7	Nhon Binh WWTP	9,872,183	100.00%	9,872,183			
1.8	O&M equipment and SCADA system	1,184,494	100.00%	1,184,494			
1.9	Solid waste management	5,040,553	100.00%	5,040,553			
1.10	Design, supervision and implementation support for component 1	2,184,339	100.00%	2,184,339			
	Sub-Total (Component 1)	33,389,189	100.00%	33,389,189			
II	Component 2: Environmental Infrastructure						
2.1	Y-Bridge	1,384,065	100.00%		1,384,065		
2.2	Huynh Tan Phat Bridge	1,845,991	100.00%		1,845,991		
2.3	Supervision and implementation support for component 2	226,104	100.00%		226,104		
	Sub-Total (Component 2)	3,456,160	100.00%		3,456,160		
III	Component 3: Compensation and site clearance						
3.1	Compensation and site clearance	517.367	0.00%				517.367
	Sub-Total (Component 3)	517.367	0.00%				517.367

Ref.	BASIC ITEMS	COSTS (USD)	FINANCING (USD)				
			%WB	WB		TF	CF
				IDA	IBRD		
IV	Component 4: Technical assistance and Institutional reform						
4.1	Institutional reform	500,000	0.00%			200,000	300,000
4.2	Technical assistance for PMU	150,000	0.00%			100,000	50,000
4.3	Prepare FS/Detail design/Bidding document	552,564	0.00%				552,564
4.4	Project management cost	1,610,000	0.00%				1,610,000
4.5	Costs for verification, preparing bidding documents and bid evaluation; mapping; demining	115,000	0.00%				115,000
4.6	Other costs	725,359	0.00%				725,359
	Sub-Total (Component 4)	3,653,103	0.00%			300,000	3,353,103
	TOTAL BASIC COSTS	41,015,818	89.83%	33,389,189	3,456,160	300,000	3,870,470
V	Contingency	8,039,691	91.66%	6,677,838	691,232		670,621
5.1	For volume: 10%*(I+II+IV)	4,019,846	91.66%	3,338,919	345,616		335,310
5.2	For depreciation: 10%*(I+II+IV)	4,019,846	91.66%	3,338,919	345,616		335,310
VI	SUB-TOTAL	49,055,509	90.13%	40,067,026	4,147,392	300,000	4,541,090
	VAT (10%)	4,823,814	91.66%	4,006,703	414,739		402,372
VII	TOTAL	53,879,323	90.27%	44,073,729	4,562,131	300,000	4,943,462
VIII	Interest during construction and fees	1,424,766	100.00%	861,801	562,965		
8.1	Front-End Fee and commitment fee	356,222	100.00%	323,175	33,047		
8.2	Interest during construction	1,068,544	100.00%	538,626	529,918		
IX	GRAND TOTAL	55,304,089	90.52%	44,935,530	5,125,096	300,000	4,943,462

8. Key physical activities (Components 1, 2, and 3) for Quy Nhon city subproject are summarized in Table 1.2 below. Component 4 includes technical support and institutional reform.

9. As part of project preparation, CCSEP project – Quy Nhon city subproject conducted planning reports: Environmental & Social Impact Assessment (ESIA), Social Assessment (SA), Resettlement Assessment Plan (RAP) as well as field survey in order to ensure with the WB safeguard policies. This executive summary highlights the salient points in the ESIA reports, and also presents relevant information from SA and RAP report.

Table 1.2: Summary of the project’s physical work components

Item type	Main specifications	Construction location
Construction of twin box culvert of Phu Hoa canal	Twin box culvert BxH = 2x3000x1800 mm and 2x3000x2200mm. L =1193 m	Quang Trung Ward
Rehabilitation of upstream ditch of Bau Sen Lake	Free stone ditch, 1076m long B=1000–1400. B=1500 B=1400	Le Hong Phong Ward and Ngo May Ward
Construction of drainage culvert at Hoc Ba Bep Area	Box culvert 780m long BxH=600x1000, BxH=1000x1200 BxH=800x1000	Dong Da Ward
Construction of rainwater drainage culvert on Tran Hung Dao Street,	Construction of box culverts in dimension of 2000x1600, 3000x1600 and pipe culvert D800-1500 with total length L=1401	Tran Hung Dao Street, Dong Da Ward, Tran Hung Dao
Construction of rainwater drainage culvert on Bach Dang Street	Construction of box culvert B600x600 and pipe culvert D600-800 with total length L=634.2	Bach Dang Street, Tran Hung Dao Ward
Construction of tertiary culvert network	Construction of tertiary culvert network with total length L=30,000m	Wards and Communes of Quy Nhon City
Raising capacity of Nhon Binh Wastewater Treatment Plant	Raising capacity of Nhon Binh Wastewater Treatment Plant from 14.000m ³ /day and night to 28.000m ³ /day and night	Nhon Binh Ward
Expansion of Long My Landfill	A-4 Cell with area of 8.51ha; Internal road; rainwater drainage; Leachate collection; Gas collection system; purchase of equipment; Upgrading Leachate Treatment Plant	Thanh Long Village, Phuoc My Commune
Pumping station and pressure	04 submersible pumps	Phuoc My Commune

pipeline from Long My to Bau Lac Wastewater Treatment Plant	Reinforced concrete air blower station Synchronous pipeline, valve, stopcock system at air blower station	
School toilets	Construction of 12 new school toilets	Phuoc My Commune, Bui Thi Xuan ward, Nhon Phu Ward, Hai Cang Ward, Nhon Hai Commune, Nhon Ly Commune, Le Loi ward, Dong Da Ward, Nhon Hoi Commune
Component 2 (US\$3,456,160 million)		
Construction of Y-shaped bridge	Total bridge length L = 90.25m; its span length of 20 m, comprising four (4) transverse spans and and 68 driven piles	Dong Da ward
Construction of Huynh Tan Phat bridge	Total bridge length L = 111.9m; its span length of 20 m, comprising five (4) transverse spans and and 85 driven piles	Dong Da ward

C. Basis of law, legislation and regulation

10. The project is required to comply with the prevailing environmental laws in Vietnam, which include the Law on environmental protection No. 55/2014/QH11 dated 23/6/2014, Decrees, Circulars, Decisions, standards and regulations of Vietnam on Environment; Circular No. 27/2015/TT-BTNMT dated 29/5/2015 of the Minister of Natural Resources and Environment on guidelines for preparation of Environmental Impact Assessment report (EIA), Strategic Environmental Assessment report (SEA), Environmental Protection Plan and Vietnamese standards and regulations. The project must also comply with the triggered safeguard policies of the World Bank, as summarized in Table 1.3 below. Very small areas of natural habitats (secondary urban forests and watercourses) are affected by the project but as these impacts are minor they do not trigger the Natural Habitats policy of the Bank (OP 4.04).

Table 1.3: Compliance with World Bank Safeguards Policies

Safeguard Policy	Actions
Environmental Assessment (OP/BP 4.01)	<ul style="list-style-type: none"> Category A project. A full ESIA including an Environment Social Management Plan (ESMP) Social Assessments have been conducted; social impacts were also considered in the ESIA report
Physical and Cultural Resources (OP/BP 4.11)	<ul style="list-style-type: none"> Chance finds procedures for archaeological artifacts found during construction have been prepared and will be included in bidding documents and contracts
Involuntary Resettlement (OP/BP 4.12)	<ul style="list-style-type: none"> Resettlement plan has been prepared (RP). The project CCSEP will acquire 196.937 m² of forestry land at Long My landfill.
Public consultation and disclosure	<ul style="list-style-type: none"> Intensive, culturally-sensitive consultations were carried out in all communities in the project area, including the key comments and project responses are reported in ESIA. Government and Non-Government organizations were also consulted in public meetings or have sent their written opinion as required by the Government's environmental regulations. The final draft of the ESIA and RP were disclosed prior to project appraisal

CHAPTER 2: BASELINE CONDITIONS IN THE PROJECT AREAS

A. Natural environment condition

11. Presented below are brief descriptions of CCSEP project – Quy Nhon city subproject

12. *Geographical condition:* Quy Nhon City (“the City”) is located at the southernmost of Binh Dinh province with the geographical coordinates of 13⁰46’ Northern latitude, 119⁰14’ Eastern longitude, of which the North borders Tuy Phuoc and Phu Cat districts, the South borders Song Cau district of Phu Yen province, the East borders South China Sea, the West borders Tuy Phuoc district, at the distance of 1,060 kilometres from Hanoi to the North and 640 kilometres from Ho Chi Minh City to the South, where the No. 1 national highway and the trans-Vietnam railway run through. The City has an airport with the regular flights to Hanoi and Ho Chi Minh City.

13. *Climate condition:* The climate in central area of the Quy Nhon city is typical for the Central Coastal region. The prevailing wind is the north-west wind during the rainy season and west wind in the dry season. The dry season is from January to August and the rainy season lasts from September to December. The rainfall in Quy Nhon allocated unevenly in the months of year, the rainy season is from September to November, accounting for 80% rainfall of whole year. In condition of hot weather, west wind in dry season, high temperature, great evaporation volume, etc... which decreases the water volume of river and channel system in the city, causes serious drought and is the one of main consequences of reducing crop productivity.

14. *Geological and hydrological:* Quy Nhon city is located at South of Ha Thanh river, which is 85km of length. The starting point of Ha Thanh river is from Southwest of Van Canh district, flows Southwest – Northeast directions to Dieu Tri and it is divided into 2 branches: Ha Thanh and Truong Uc (with 580 km² of catchment area). Currently, Ha Thanh river are often dry, the flow is inconsiderable in summer. In rainy season, river water flows very fast and it often causes flood in October to November, the flood time lasts 58 to 75 hours. For the oceanographic, extreme water level is calculated according to annual cycle and shown in the table 2.1 below:

Table 2.1. Extreme water level according to annual cycle

Repeated cycle (year)	2	5	10	20	25	50	100
H (cm) (Country)	76.0	86.3	93.1	99.6	101.7	108.0	114.1

15. *Air quality, noise:* Air quality in Quy Nhon city area is within allowable limits according to QCVN05:2013/BTNMT.

16. *Surface water quality:* Several analysis parameters of surface water samples such as Cl⁻, NH₄⁺, BOD₅, Fe and oil and grease exceed allowable limits according to QCVN 08:2015/BTNMT, column A2: using for water supply but it is necessary to apply appropriate treatment technology. The analysis results showed that surface water samples were polluted by oil and grease. This parameter exceeds many times comparing with allowable limit according to QCVN 08:2015/BTNMT, column A2.

17. *Groundwater quality:* Overall, analysis results of ground water samples taken in Quy Nhon city are within allowable limit according to QCVN09:2015/BTNMT. However, there were a few of parameters exceeding allowable limit such as Cl⁻, NH₄⁺ but it is only a minority.

18. Domestic wastewater quality: Domestic wastewater in Quy Nhon city is polluted seriously. There were analysis parameters exceeding many times comparing with allowable limit according to QCVN14:2008/BTNMT, column A such as oil and grease, BOD₅, NH₄⁺, TSS.

19. Soil quality and sediment: Soil samples taken in Quy Nhon city area are within allowable limit according to QCVN 03:2015/BTNMT, livelihood land.

20. **Current state of biological resources in project's construction area**

Construction area of Nhon Binh wastewater treatment plant

- Nhon Binh WWTP is surrounded by rice fields, shrimp farm and people's irrigation ditches, terrestrial biological resources in this area are mainly rice, scrubs. Especially there was an invasive specie Mimosa which is harmful for agricultural land as well as other species. The main animals here are duck, dog and cat.

Construction area of A-4 cell (Long My landfill)

- Construction area around A-4 all of Long My landfill mainly is timer trees (Acacia, Eucalyptus...) which planted by households living around these area. The main animals here are kinds of bird such as crow, stork and several small birds searching food at Long My landfill.

21. **Aquatic species living in project construction area:**

Analysis results of aquatic species in Ha Thanh river show that:

Phytoplankton

+ There are 22 phytoplankton species found out of 4 sectors: *Dinophyceae algae* (10 species), *Bacillariophyceae algae* (8 species), *Euglenophyceae alage* (2 species) and *Cyanobacteria* (2 species)

Zooplankton

+ There are 15 Zooplankton species found out of 8 groups: *Hydromedusa* (2 species), *Ctenophora* (2 species), *Cladocera* (1 specie), *Copepoda* (6 species), *Sergestidae* (1 specie), *Tanaidacea* (1 specie), *Amphipoda* (1 specie), *Larvae* (2 species)

Benthos

+ There are 15 benthos species found out of 4 sectors: *Annelida* (6 species), *Arthropoda* (2 species), *Mollusca* (7 species).

Remarks: Ha Thanh river has had the large amount of *Phytoplankton*, *Zooplankton* and *benthos*. Those are food source for almost of fishes and eels in river. The estuary and river fishes mainly are freshwater fish (carp, catfish, eel, fish, loach, snakehead) and brackish water species (Milkfish, Gray mullet, Gerreidae). However, there are no endemic aquatic species, species of the Red Book in construction area of the CCSEP project. Fishes, eels living in Ha thanh river are native species and non-migrant species. Beside, There are no aquaculture activities occurring on Ha Thanh river (construction area of Y-shaped bridge and Huynh Tan Phat bridge). The project activities also do not cause impacts to the aquatic system on Ha Thanh river.

B. Economic-Social condition

22. Population: The city's population is about 285,543 people (based on Quy Nhon city statistical yearbook 2014), which includes 16 wards: Quang Trung, Le Hong Phong,

Ngo May, Dong Da, Tran Hung Dao, Le Loi, Tran Phu, Lu Thiong Kiet, Nguyen Van Cu, Thi Nai, Hai Cang, Ghenh Rang, Nhon Phu, Nhon Binh, Tran Quang Dieu, Bui Thi Xuan and 5 communes: Nhon Ly, Nhon Hai, Nhon Hoi, Phuoc My and Nhon Chau.

23. Economic structure and growth:

+ Industry: Production value is estimated at 7,371.8 billion VND, increases by 11.12% over the same period last year

+ Trade, tourism and services: Total annual retail sales of goods and revenue from services rendered increased by 14.3%. Exports value reached US\$530.4 million in 2014, increases by 1.4 times comparing with 2010.

+ Agriculture - forestry – fishery: Annual production value of agriculture, forestry and fishery increases by 3.6%

24. Current land utilization: According to the 2014 statistical yearbook of Quy Nhon city, the city has a total land area is 28,552.9 hectares by 2013. In which, agricultural land accounts for 63.7%; Non-agricultural land accounts for 29.8%; the remaining portion (6.5%) is unused land.

25. Labour and employment: As of 31 December 2014, the total number of employees in enterprises is approximately 78,273, in which the number of employees in state-owned enterprises is about 6,798, the number of employees in non-state enterprises is about 69,819, the number of employees in enterprises with foreign investment is about 1,656. For non-agricultural, non-forestry and non-fishery individual sector: Total workforce is about 32,350 persons, including the processing industry sector (3,398 persons); wholesale, retail, repair of vehicles (13,053 persons); business service (10,339 persons). Overall, the number of workers working in other sectors accounts for small quantities. For the employment issues in project construction area, Most of the household's income are from state salaries (including public officials currently in office and retired) and the business households are those with relatively stable income and stable life. Poor persons often have no job or instable employment, uncertain income, instable life.

26. Water supply and drainage: According to the results of household survey show that: 98.4% of households in project construction area mainly use tap water, which is provided by city water supply Company. There is only a small portion of households not using tap water in project construction area. For the drainage issue, Quy Nhon city's drainage catchment is shown in the Figure below:

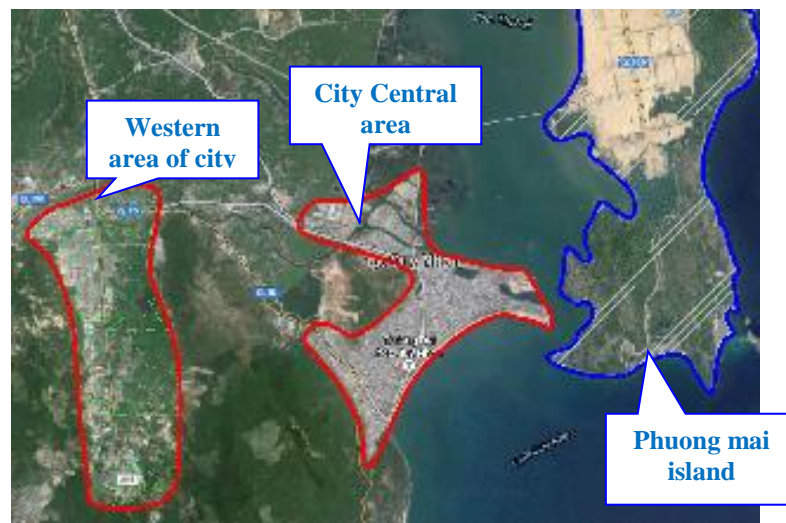


Figure 0.1. Current drainage zoning of the Quy Nhon city

27. Domestic solid waste from residential areas, streets, offices ... in the urban area is daily collected and transported to temporary garbage transit locations in each area by the workers of Quy Nhon Urban Environment Company. Solid waste from markets in the city is collected by Market Management Board and transported to temporary garbage transit locations. Quy Nhon city currently has about 64 solid waste collection locations. Solid waste after collected, gathered at the temporary transit locations will be transported to Long My landfill, which is about 20km of distance to the southwest of the city center by Urban Environment Company's garbage trucks.

28. *Sensitive locations in some construction areas of the project:*

Sensitive locations in some construction areas of the project are shown in the Table 2.2 below:

Table 2.2. Sensitive location in some construction areas of the project

STT	Project construction area	Main construction item	Sensitive location and its distance to the works item of the project (m)
1	Phu Hoa channel	Twin box culvert	Nguyen Hue pagoda (2) Dong Hai Mechanical Co., Ltd (20) Binh Dinh provincial youth union (45)
2	Upstream ditch of Bau Sen lake	Free stone ditch	Households living near upstream ditch of Bau Sen lake
3	Hoc Ba Bep area	Stormwater drainage culvert	Households living near the construction culvert system Railway (03 segment of culvert will run beneath the railway)
4	Bach Dang street		Sen Hong kindergarten (2) Truc lam pagoda (2)
5	Tran Hung Dao street		Phong Lan semi-public kindergarten (4-5) Dong Da secondary school (4-5) Quy Nhon twin tower (4-5) Tay Ninh Holy See (4-5) Quy Nhon monastic (4-5)
8	Dong Da ward	Y-shaped bridge	Wastewater pipeline located parallely with Y-shaped bridge (2m) Business households living near the bridge The access roads
		Huynh Tan Phat bridge	The access roads Business households living near the construction area of bridge

CHAPTER 3: ENVIROMENTAL AND SOCIAL IMPACT ASSESSMENT AND FORECAST

29. Environmental-social impact assessment for Quy Nhon city subproject investment were developed based on document reviews, meetings with key agencies, field visits to project sites and collection of environmental data (air, noise, vibration, sediment, sludge analysis, etc). A checklist method was used to identify key issues. In addition to the ESIA report, Resettlement Plan report (RP), Social Assessment report (SA) for Quy Nhon city subproject, have also been prepared in line with relevant WB’s safeguard policies. Section 3.1 and 3.2 summarizes key positive and risk and potential negative impacts of the project, during the site clearance, construction and operation phases of the project.

3.1. Positive impacts

30. Overall the project construction will bring positive impacts to the environment and society. The capacity of wastewater collection and stormwater drainage on Quy Nhon city area will be improved significantly through the construction of Nhon Binh WWTP and stormwater drainage culvert system. Besides, capacity of solid waste management and traffic infrastructure connection is also improved through the construction of new A-4 cell in the area of Long My landfill and Y-shaped bridge and Huynh Tan Phat bridge. Those construction works will contribute to improve environmental sanitation condition as well as boost economic-social development in project area.

3.2. Risk and potential negative impacts

31. Project will cause negative impacts to the environment and community through activities such as (1) land acquisition, site clearance; (2) construction activities of the project; (3) some activities after completing project. Type and nature of impact change significantly according to the nature and scale of three activities mentioned above. However, construction works of the project are in medium and small scale with almost of temporary and localized negative impacts. Therefore, those impacts is completely able to mitigate through applying mitigation measures and management (will be presented in chapter 5). Impact level of the project will be presented respectively in the Table 3.1 below:

Table 0.1. Impact level of project’s works’ items

Work items	Physical elements			Biological elements		Social elements				Others		Notes
	Air, noise, vibration	Soil, water	Solid waste, dredged sludge	Forest, natural ecosystem	Fish, aquatic species	Land acquisition, resettlement	Native ethnic groups	Tangible culture resources	Livelihood, disturbance to residential community	Localized flooding, traffic, safety	Impacts from outside project area	
Twin box culvert at Phu Hoa channel, Freestone ditch at upstream ditch of Bau Sen lake												
Preparation	L	L	L	N	N	N	N	N	N	N	N	- Small and medium scale works with small impacts (see Notes (2) below for further information)
Construction	M	M	M	N	N	N	N	M	M	M	L	
Operation	N	N	L	N	N	N	N	N	N	N	N	
Construction of stormwater and wastewater culvert system												
Preparation	L	L	N	N	N	N	N	N	L	N	N	- Small and medium scale works with small impacts (see Notes (2) below for further information)
Construction	M	M	L	N	N	N	N	L	M	M	L	
Operation	N	N	L	N	N	N	N	N	N	L	L	
Upgrading Nhon Binh WWTP's capacity												
Preparation	L	L	L	N	N	N	N	N	N	L	L	- Medium- scale works with medium impacts (see Notes (2) below for further information)
Construction	M	M	M	N	N	N	N	L	L	M	L	
Operation	N	N	N	N	N	N	N	N	N	N	N	
Construction A-4 cell in Long My landfill												
Preparation	L	L	L	M	N	M	N	N	M	N	N	- Medium- scale works with medium impacts (see Notes (2) below for further information)
Construction	M	M	M	M	N	M	N	N	M	N	L	
Operation	L	L	L	N	N	N	N	N	N	N	L	
Closure phase of landfill cell	L	L	L	N	N	N	N	N	N	L	N	
Construction Y-shaped bridge and Huynh Tan Phat bridge												
Preparation	L	L	L	N	N	N	N	N	L	L	L	- Medium- scale works with medium impacts (see Notes (2) below for further information)
Construction	M	M	M	N	L	N	N	N	M	M	M	
Operation	L	M	L	N	N	N	N	N	L	N	N	
Notes: (1) The following criteria are used to assess the level of impacts: None (N) – No impacts; Low (L) – Small work, small impacts, localized, reversible, temporary; Medium (M) – Small works in sensitive/urban areas, medium-scale with medium impacts, reversible, able to be mitigated and managed, localized, temporary; High (H) – Medium-scale works in small sensitive/urban areas, large-scale works with significant impacts (social and/or environmental), many of which are irreversible and require compensation. Both M and H require monitoring and implementation of mitigation measures as well as an appropriate institutional capacity in terms of safety. (2) Most impacts of small and medium scale works are localized and temporary and can be mitigated through the application of technical solutions and good construction management practice with strict supervision, inspection and consultation with the local community.												

32. Land acquisition: There are 6 households (06 severely affected households) affected by project's land acquisition with total forestry land is about 196.937 m². Detail in household's name and affected land area are presented in the table 3.2 below:

Table 0.2. Household's name and affected land area

No	Household name	Forestry land			
		Total area (m ²)	Affected area (m ²)	% AH (m ²)	Affected crop
1	Quàng Văn Bình	21,250	13,000	61	Acacia, Eucalyptus
2	Nguyễn Bá Ngụ	30,000	27,146	90	Acacia, Eucalyptus
3	Trần Kim Phụng	94,600	49,000	52	Acacia, Eucalyptus
4	Phạm Tấn Toàn	30,000	15,000	50	Acacia, Eucalyptus
5	Đào Thiên Thọ	70,000	37,000	53	Acacia, Eucalyptus
6	Lê Xuân Văn	88,000	55,791	63	Acacia, Eucalyptus
Total		333,850	196,937		

33. Preliminary impact assessment for whole project process is shown in table 3.3 below:

Table 0.3. Preliminary impact assessment for whole project process

Impacts	Sources	Affected subjects	Level and duration
PREPARATION PHASE			
Component 1 (Hygienic infrastructure)			
Houses, land, crops	Location selection The design of the project Site clearance	Existing works People living condition Land use structure	Low, In the preparation and land acquisition phase
Component 2 (Environmental infrastructure)			
Houses, land,	Location selection Site clearance	Existing works People living condition	Low, In the preparation and land acquisition phase
CONSTRUCTION PHASE			
General impacts of two components			
Air pollution: Smoke Dust Noise and vibration	Smoke, emissions from transport vehicles Odor from manholes and dredging mud Impact of vibrations during the construction phase especially bridge construction	People living around construction area Workers on site construction	Average, can be controlled during construction time
Pollution of surface water resources Increase turbidity Increase concentrations of other pollutants Organic pollution Pollution by toxic	Waste sludge, soil from the construction work drain into water resources Domestic wastewater from the construction site. Incident of spilling oil or disposal of dredging material into water resources Petroleum and hazardous substances leak into water resources	Phu Hoa channel, Ha Thanh River, Bau Sen upstream drain	Average, can be controlled during construction time

waste Other Pollution			
Environmental pollution of groundwater and soil	Construction waste Hazardous waste Untreated wastewater Destruction of weathered soil surface Destruction of impure soil surface	Construction site	Average, can be controlled during construction time
Hazardous waste generation	Digging soil Dredging mud Leftover construction materials Domestic waste from camps	Construction workers, local residents Water Environment (Ha Thanh River)	Average, can be controlled during construction time
Influence to urban landscape	Activities of gathering temporary materials and construction waste Material and waste are dropped in transport process	General landscape of the city	Average, can be controlled
Safety risks for workers	The loading and unloading activities of material Construction activities of heavy machineries	Workers	Average, can be controlled during construction process
Safety risks for communities	The loading and unloading activities of material Construction activities of heavy machineries	Residential area living near construction site	Average, can be controlled during construction process
Interruption of existing services	Electrical and water system may be damaged due to project's construction activities	Community in project construction area	Average, can be controlled during construction process
Social disturbance	Due to the big number of workers come from other place	Social security	Large, but can be controlled in construction process
Component 1 (Hygienic infrastructure)			
Flooding risk	Construction activities, earthworks taking place in the rainy season Material gathering changing ground elevation and interrupting existing drainage system in construction area	Hoc Ba Bep area, upstream ditch of Bau Sen lake	Low, can be controlled during construction process
Erosion	Activities of digging soil, installing culvert system	Hoc Ba Bep area, upstream ditch of Bau Sen lake	Short term, can be controlled in construction process
Risk of land subsidence, landslide	Digging activities: large pit and trench	Households living near construction area (Tran Hung Dao, Bach Dang)	Medium, can be controlled in construction process
Influences to landscape	Leveling, cutting trees, upgrading Nhon Binh WWTP's capacity and construction of new A-4 cell in Long My landfill	General landscape of the city	Long term impact
Influence to ecosystem	Disappear existing vegetation in construction area of Nhon Binh WWTP and Long My landfill Narrow tại khu vực bãi rác Long Mỹ	Animals and vegetation at Nhon Binh WWTP and Long My landfill	Average, short term in construction process
Railway safety	Influence to railway system and railway traffic participant in construction process of stormwater	Workers, railway traffic participant	Large, can be controlled in construction process

	drainage culvert at Hoc Ba Bep area		
Influence to business household's income	Construction near stores and shops	Household businesses along Tran Hung Dao, Bach Dang	Average In construction process
Influence to tourism and festival activities	Construction of culvert system on Tran Hung Dao, Bach Dang street and Phu Hoa channel.	Quy Nhon twin tower, Ngoc Nhon monastic, Tay Ninh Holy See, Truc Lam and Nguyen Hue pagoda	Average In construction process
Risk of explosion, short-circuit	Warehouse, indiscriminate use of combustible materials in construction process	Workers, camps on construction site	Large, can be controlled in construction process
Safety risk of pupils, teacher and school infrastructure	Thi công nhà vệ sinh trường học	Pupils and teachers	Medium, can be controlled in construction process
Change find procedure	Dredging, digging and leveling	Archaeological artifacts	Medium, can be controlled in construction process
Component 2 (Environmental infrastructure)			
Waterway safety	Construction of Y-shaped bridge and Huynh Tan Phat bridge	The boats moving near bridge construction area	Low, almost no impact
Aquatic system	Dredging and construction of 02 bridges	Aquatic system on Ha Thanh river	Average, can be controlled in construction process
Landscape	Leveling, bridge construction	General landscape of the city	Long-term impacts
Interruption or increase of road traffic risk	Loading and unloading material cause traffic interruption	Construction of Y-shaped bridge and Huynh Tan Phat bridge	Average, can be controlled in construction process
OPERATION PHASE			
Component 1 (Hygienic infrastructure)			
Sludge	activities of Periodical manholes dredging Treatment plant's activities	Soil, air Environment, wastewater	Short-term and localized, can be controlled
Noise	Pumping operation	Operational workers	Low, long-term, can be controlled
Odor	Pumping operation Landfill operation	Operational workers Residents	Average, long-term, can be controlled
Public health	Landfill operation		Average, long-term, can be controlled
Incidents of WWTP and landfill operation	Risk of leachate and wastewater leakage	Groundwater environment, aquatic systems in Ha Thanh River	Long-term, can be controlled
Health and occupational safety	The leakage of H ₂ S gas in pumping station can affect worker's health Dredging mud periodically at manholes.		Negative, long-term, can be controlled
Component 2 (environmental infrastructure)			

Emission	Vehicles	People's health	Significant, long-term but can be controlled
Noise	Vehicles		Low, long-term
Closure phase of landfill cell			
Wastewater	Leachate from landfill cell Wastewater of landfill area (washing vehicles.)	Aquatic system, water environment	
Emission	CH ₄ , CO ₂ , H ₂ S, NH ₃	Ecosystem, air environment	

34. Historical – belief – cultural works: There are no big impacts affecting historical – belief – cultural works in project construction area. Impacts mainly are dust, emission in transport process of material and waste. Those impacts will be minimized through mitigation measures and management.

35. Impacts to ecosystem: According to result of field survey and analysis, project activities do not cause negative impacts to ecosystem. Nature reserves and biosphere reserves are far from project construction area (10-80km), therefore, those areas do not affected by project's activities. Since up to now, Ha Thanh river has not found out yet any Red List species or migratory fish species. In other hand, area of Ha Thanh river currently affected by people's daily activities, therefore, impacts to ecosystem is low level.

36. Cumulative impacts: Projects considered as cumulative projects with CCSEP project include: (1) Coastal cities environmental sanitation project (CCESP) – Quy Nhon city subproject; (2) Existent Hoa Lu street technical infrastructure project of extended Hoa Lu street. The project CCESP had finished in 2014 so construction process will not cause cumulative impacts. However, the CCSEP is a continual project of CCESP project and there would be several components relating to CCESP project, which to solve the remaining environmental issues and ensure the sustainable development. For the extended Hoa Lu street project, cumulative impacts such as dust, noise will arise on Dong Da ward, where constructs Y-shaped bridge and Huynh Tan Phat bridge. However, those impacts are short-term and localized.

37. Synthesis of environmentally sensitive locations and its site-specific impacts.

No	Name	Location	Site-specific impacts
1	Nguyen Hue pagoda	Xuan Thuy street	Construction activities may cause dust, noise, vibration affecting people's religious activities
2	Phong Lan semi-public kindergarten Dong Da secondary school Quy Nhon twin tower Tay Ninh Holy See Quy Nhon monastic	Tran Hung Dao street	Construction activities may cause dust, noise, vibration affecting pupils, teacher and people's religious activities Risk of accident in construction process of culvert system Influences to general landscape of the city
3	Sen Hong kindergarten	Bach Dang street	Construction activities may cause dust, noise, vibration affecting pupils and teacher Risk of accident in construction process of culvert system
4	Truc lam pagoda	Doan Thi Diem street	Construction activities may cause dust, noise, vibration affecting

			people's religious activities Influences to general landscape of the city
--	--	--	---

38. Compliance with environment and safety regulations at mines: Overall, licensed mines have been complied with environmental safeguard policies, occupational safety and ensured environmental deposit procedures in line with Vietnam laws.

CHAPTER 4: ANALYSIS OF ALTERNATIVES

39. The project’s proposed investments are in line with the cities’ master plans which have been approved by the Government. Alternatives were considered in the preparation of the master plans, which are also subject to review by environmental authorities as per Vietnamese law. Alternatives were further considered by the cities where appropriate during the project’s feasibility study and related EIA preparation

40. The advantages and disadvantages in cases “with” and “without project” are presented in the table 4.1 below:

Table 0.1. Comparison for the cases “with” and “without” project

Case	Without project	With project
Advantages	No affected by construction activities such as dust, noise, air pollution and short-term influence to local economy	The number of beneficiary people from project activities: + Component 1: people who are living in inundation region + Component 2: The area traffic shall be improved
Disadvantage	Environmental sanitation condition will gradually decreased, especially densely populated area. + Flooding and inundation; + Decreases surface water quality and ground water ; + Poor sanitation condition; + Poor landscape;	Cause some localized impacts at project implementation areas in Quy Nhon city, those areas shall be affected by construction activities such as dust, noise, air pollution, water pollution and construction waste

41. Comparison for treatment technologies of Nhon Binh wastewater treatment plant is presented in the table 4.2 below:

Table 0.2. Comparison for selection of Nhon Binh WWTP treatment techniques

STT	Analysis	Option 1 (Preliminary treatment + chemical enhancement + Imhoff sedimentation+ Biofilter Tricking filter + Disinfection)	Option 2 (Preliminary treatment + chemical enhancement + Imhoff sedimentation + anaerobic Biofilter + aeration pond + Disinfection)
1	Treatment efficiency	- High treatment efficiency	- High treatment efficiency, especially Ammonia and Phosphorus treatment process as well as provision for the future discharge standards
2	Economic	- Option 1’s investment cost is lower than option 2’s investment cost	- High investment cost: + Adjust technology and renovate anaerobic preliminary sedimentation of phase 1 to for both phases. + Invest sludge treatment for phase 2.
3	Environmental	- Applied for most kinds of wastewater polluted by organic substance	- Applied for most kinds of wastewater polluted by organic substance
4	Social	- Do not affected by noise to the people living around	- Do not affected by noise to the people living around
5	Operation	- Simple operation without high level of operator - Sync with the technology of phase 1; two phases are homologous so it is able to	- Simple operation without high level of operator - It is not sync with the technology of phase 1 so it requires the large number of workers. Không đồng bộ với công nghệ của giai đoạn

	reduce workers	1, nên đòi hỏi cần nhiều công nhân vận hành
--	----------------	---

Through the analysis above, option 1 (Preliminary treatment + chemical enhancement + Imhoff sedimentation+ Biofilter Tricking filter + Disinfection) is the proposed technology for Nhon Binh wastewater treatment plant, phase 2.

42. Comparison for Leachate treatment technologies of A-4 cell in Long My landfill is presented in the table 4.3 below:

Table 0.3. Comparison for selection of leachate treatment technologies

STT	Analysis	Option 1 (Anaerobic biological treatment, discretionary + primary Treatment + physical chemistry level 1+Biotreatment+ physical chemistry 2 + Chemical treatment)	Option 2 (Anaerobic biological treatment, discretionary + primary Treatment + physical chemistry level 1+Biotreatment+ + RO filter)
1	Treatment efficiency	- High treatment efficiency	- High treatment efficiency
2	Economic	- Reasonable investment cost	- High investment cost - High maintenance cost
3	Environmental	- Efficient processing of organic mattersuch as COD, BOD ₅ , NH ₄ ⁺ ... in leachate - Demand of energy consumption is stable so it is able to decrease green house	The pollutants will increase its pollution load because biological treatment is not handled thoroughly.
4	Social	- Efficient processing of leachate odor and do not affect worker's health	- Efficient processing of leachate odor and do not affect worker's health
5	Operation	- Simple and efficient operation without high level of operator - Efficient operation in each case of wastewater characteristic (low pollution load in rainy season and high pollution load in dry season)	- Complex operation and operator must be trained proficiently - RO membranes are able to be clogged

Through analysis above, Option 1 (Anaerobic biological treatment, discretionary + primary Treatment + physical chemistry level 1+Biotreatment+ physical chemistry 2 + Chemical treatment) is the chosen one for Long My leachate treatment plant.

CHAPTER 5: MITIGATION MEASURES FOR NEGATIVE IMPACTS AND ENVIRONMENTAL INCIDENTS

43. Mitigation measures for negative impacts are researched and proposed in three phases of the project include: preparation, construction and operation phase. In detail design process, negative impacts will be minimized as much as possible through combining with designs, bidding documents and contract with construction contractors. Bidding documents and contract will reflect (i) general mitigation measures (ECOPs); (ii) mitigation measures for each type of works; (iii) site-specific mitigation measures. Detail in (i), (ii) and (iii) are presented in ESIA report of CCSEP project – Quy Nhon city subproject.

44. Solutions to renovate landscape, environment, energy saving and safety during the process of works operation have been proposed in FS and will be synthesized in detail design

A. Preparation phase

45. Estimated cost for Resettlement Action Plan of the sub-project is approximately 13,860,231,000VND (equivalent to 620,839 USD at the exchange rate of 22,325 VND = 1 USD). Estimated cost for land clearance and resettlement is calculated based on provisions set by People committee of Binh Dinh province and policies determined by the World Bank. Estimated cost for project implementation will be updated upon land acquisition.

B. Construction phase

46. Mitigation measures and general management in construction phase applied to mitigate key negative impacts as following:

- Impacts from dust, smoke, noise, bad odors and vibration,
- Wastewater,
- Solid waste,
- Hazardous waste,
- Water pollution,
- Impacts on living creatures and aquatic species,
- Impacts on urban beauty and landscape,
- Flooding, erosion and sedimentation,
- Subsidence,
- Traffic safety issues,
- infrastructural works and existing services,
- Social impacts,
- religious and cultural works,
- Community health and safety,
- Safety and health of workers.

47. Mitigation measures for each type of works include: (i) Phu Hoa channel and upstream ditch of Bau Sen lake; (ii) stormwater drainage culvert on Tran Hung Dao, Bach Dang street and Hoc Ba Bep area; (iii) Nhon Binh WWTP; (iv) A-4 cell of Long My

landfill; (v) School toilets; (vi) Y-shaped bridge and Huynh Tan Phat bridge. Those mitigation measure will be put in construction contract for each type of works including ECOPs.

48. Site-specific mitigation measures have also been proposed for environmentally sensitive locations, where are near project construction area. Those environmentally sensitive locations such as pagoda, school, Holy See, monastic, relic are presented fully in ESIA report. Those site-specific mitigation measure will be put in construction contractor including ECOPs and mitigation measures for each type of works.

49. Mitigation measures for accumulative impacts: carrying out fully mitigation measures proposed in ESIA report will partly mitigate accumulative impacts for CCSEP project

C. Mitigation measures to control pollution during operation phase

50. The locations are considered to propose mitigation measures for controlling pollution during operation phase such as Nhon Binh WWTP, A-4 cell in Long My landfill. Those mitigation measures include: waste sludge treatment, discharge incident, leaking chemical, odor treatment, firefighting. For the other works, mitigation measures mainly are: checking and periodic maintenance and periodic dredging for culvert system.

CHAPTER 6: ENVIRONMENTAL MANAGEMENT PLAN

51. On the basis of the assessment of negative impacts presented in Chapter 4 and the measures of impact mitigation recommended in Chapter 5, this Chapter will present the Coastal Cities Sustainable Environment Project (CCSEP)- Quy Nhon city Sub-project. The Environmental Management Program will identify the activities/actions to be implemented in the city of Quy Nhon Sub-project, including the environmental monitoring program and its implementation schedule, taking into account the compliance with the provisions of the Government's EIA and safety policies of the World Bank (WB).

6.1 Environmental Management Program

52. To ensure that all sources of pollution arising from the Project activities during the preparation stage and the construction stage as well as in the operation period will not cause any negative impacts on the environment and public health, it is compulsory that the management, monitoring and supervision of environmental quality be executed in a scientific, systematic and regular manner.

53. ESMP's mitigation measures are divided into 3 basic parts: (1) ECOPs, (2) mitigation measures for the Project's components, and (3) site-specific mitigation measures for each location of the Project's items.

54. The first, this ECOP will outline impacts of a typically low level which may occur in a series of project construction operations. An ECOP includes measures to mitigate those impacts and is a procedure to be integrated into contractors' construction contracts. The mitigation measures in this ECOP will be developed and integrated into all the construction contracts under this Project. Typical common impacts which will be minimized by mitigation measures defined in ECOP include: (1) Dust, exhaust gases, noise and vibration; (2) wastewater management; (3) Solid waste management; (4) Hazardous waste; (5) Water pollution management; (6) Impacts on aquatic species and terrestrial ecology; (7) Management of impacts on urban landscape and beauty; (8) Management measures of sedimentation, erosion and flooding; (9) Subsidence and slide management; (10) Traffic safety management; (12) Management of impacts on social activities; (13) Management of impacts on cultural and religious works; (14) Measures to secure community health and safety; (15) Measures to secure worker's health and safety.

55. The second, Mitigation measures for project's components will describe specific mitigation measures for the Project's components and are included in the contracts for corresponding packages.

56. The third, All those impacts specific to each position of the Project of which mitigation measures are not included in the general ECOPs or take place at a level that necessitates other measures.

57. Measures to mitigate impacts from land acquisition and resettlement are mentioned separately in the Resettlement Plan (RP) and those measures will be carried out and supervised separately.

6.2. Implementation organization structure and roles of stakeholders

58. Below summarize the roles and responsibilities of the key parties and their relationships regarding the implementation of the EMP.

- PMU is responsible for implementing the EMP during the detailed design and construction stages. EMP implementation during operation stage is the responsibility of the facilities operators. PMU will set up an Environmental and

Social Unit (ESU) to ensure timely and effective implementation of the EMP, including preparation of reports on safeguard compliance as required by the Vietnamese Government and WB.

- Contractors will be responsible for implementing mitigation measures. These measures will be included in bidding documents and their costs are to be included in construction bid packages;
- CSC will be responsible for monitoring the day-to-day implementation of mitigation measures. Related costs are included in the CSC service contract;
- IEMC will be responsible for overall environmental monitoring which includes support to the PMU in implementing environmental supervision and monitoring, and responsible for reporting on the implementation through monitoring reports

59. The PMU will prepare reports twice per year for submission to the World Bank, including the compliance with the EMP. The report will contain the monitoring results and assessments of the IEMC that show project progress and the state of implementation of the EMP.

6.3. Environmental monitoring program

60. It is essential to design the monitoring program and monitoring frequency appropriately to be able to record both the overall performance of the project works as well as the short-term impact due to construction activities. The environmental monitoring program will be implemented during the pre-construction and construction phases at 3 levels.

- Monitoring the level of compliance with mitigation measures,
- Community-based monitoring, and
- Monitoring the environmental parameters set out in the EIAs

6.4. Plan of improving capacity and environmental management capacity

61. Training programs will be developed and implemented by a team of Technical Assistance for the implementation of safety policies for PMU. PMU / IEMC with the help of the Technical Assistance Team will provide training for contractors, CSC and other groups

62. The scope of the technical assistance would cover support from experts and training that would cover both the knowledge on safeguards requirements and procedures for the project as well as training that covers both specific knowledge on safeguard procedures and requirement for the project staff, consultants, and national contractor would be important. This would include, for example, assistance in the preparation of documents and implementation of training program on environmental management and environmental monitoring for contractors, CSC and relevant staffs of PMU (environmental staffs and coordinators of packages) to do their tasks. It would also include assisting the PMU's environmental staff with the review of contract documents on the bidding packages for construction items of the project to ensure compliance with environmental protection policies and impact mitigation and monitoring requirements as well as provide general environmental guidance as requested by the PMU to enhance overall project implementation and performance

6.5. Total Estimates

63. The following table provides a cost estimate for the implementation of environmental management plan (EMP). The cost of EMP¹ implementation will include (i) the costs of implementing mitigation measures by the contractor, (ii) expenses supervised by CSC, (iii) cost of the independent environmental monitoring consultant (IEMC), (iv) the costs of environmental quality monitoring, (v) the cost of safety management for the PMU, including both technical assistance in implementing safety policies and training programs. The costs of implementing mitigation measures during construction will be a part of the value of construction contracts, while the costs for a site-specific environmental monitoring plan (SEMP) by the construction supervision consultant (CSC) will be provided in construction supervision contracts. The costs of the PMU operations relating to EMP are allocated from the project management budget of the PMU, including safety training programs, and basic allowances to participants in the monitoring programs.

64. The following table provides the estimated costs for environmental quality monitoring and IEMC (in accordance with national practices) for reference purposes. However, final costs will be updated in the detailed design phase.

Table 6-1. Estimated costs of EMP implementation (USD million)

	Items of Quy Nhon Sub-project (million USD)	Funded by
(a) Mitigation during construction	As a part of the contract	WB
(b) Monitoring safety policies during construction	As a part of the cost for Construction Supervision Consulting (CSC)	WB
(c) PMU's units in charge of environmental safety policies	As part of the costs for the PMU	Counterpart funds
(d) Environmental quality monitoring	0.019	WB
(e) Independent environmental monitoring consulting (IEMC)	0.034	WB
(f) Capacity building programs on safeguard policies		WB

6.6. Mechanism of Solving Complaints

65. Complaints relating to any Project's problems will be solved through negotiations to achieve the consensus. A complaint will go through three stages before it can be transferred to the court. The enforcement unit will pay all administrative and legal fees relating to the acceptance of complaints. This cost is included in the project budget.

¹Excluding costs for RP implementation and independent monitoring the performance of RP/EMP

CHAPTER 7: PUBLIC CONSULTATION AND INFORMATION DISCLOSURE

A. Summary of public consultation with Ward/Commune People’s Committees and consultation with departments and agencies

66. The Employer of the Project – Binh Dinh Project Management Unit of the key projects –issued Dispatch No. 574/BQLDA-MT dated 04 July 2016 on carrying out consultation with the People’s Committees of wards/communes in the Project area (Tran Hung Dao, Le Loi, Le Hong Phong, Tran Phu, Ly Thuong Kiet, Nguyen Van Cu, Dong Da, Thi Nai, Hai Cang, Ngo May, Ghenh Rang, Quang Trung, Nhon Binh, Nhon Phu, Bui Thi Xuan, Tran Quang Dieu, Phuoc My) for their opinions on the Project’s ESIA report.

B. Summary of public consultation implementation

67. 1st consultation: Binh Dinh Project Management Unit of the key projects, in cooperation with local authorities, conducted a consultation session with local residents about environmental issues and environmental protection and sanitation measures of the Project on February 19th – 27th, 2016.

68. 2nd consultation: Binh Dinh Project Management Unit of the key projects, in cooperation with local authorities, conducted consultation with local residents about environmental issues and environmental protection and sanitation measures of the Project on July 7th – 15th 2016 after the draft ESIA report was available.

Table 7.1. Public consultation implementation

Subproject	Date	Purpose	Community’s opinions
The first public consultation			
	February 19 th – February 27 th , 2016	- To share all information proposed project activities with the community and stakeholders living in the project areas - To collect opinions; understand the concerns and sensitivities of local authorities and communities	<ul style="list-style-type: none"> ○ Local people support the implement of the project ○ Quickly implement the project, details of time and method need to be publicly disclosed to local people ○ Minimize environmental pollution such as dust, construction debris and noise during the construction. ○ Require the PMB to ensure traffic safety by displaying signposts, construction signs to redirect vehicles to other roads. ○ The project must have resettlement plan for the local people in case of land withdrawal ○ Adequate compensation for local people who lose their plants at the expanded area for landfill.
The second public consultation			

Subproject	Date	Purpose	Community's opinions
July 7 th – July 15 th 2016		- World Bank and the consultants sought opinions of leaders, unions, and organizations, and representatives of residents living in the Project-affected areas on the contents of draft environmental impact assessment	<ul style="list-style-type: none"> ○ Local people support the implement of the project ○ Require the PMB to ensure traffic safety by displaying signposts, construction signs to redirect vehicles to other roads ○ Quickly implement the project, details of time and method need to be publicly disclosed to local people

C. Disclosure

69. The draft EIA report will be published at the offices of Quy Nhon City People's Committee and the People's Committees of Wards/Communes on 03/10/2016. Information on the release date will be posted on the website of Quy Nhon City People's Committee. Basing themselves on the contents of the EIA report, local people could get hold of Project information and contribute their opinions/comments on environmental issues of the Project.

70. The final version of this EIA report will be sent to World Bank and released on Infoshop

CONCLUSION, RECOMMENDATION AND COMMITMENTS

1. Conclusion

71. The Project will contribute to improving drainage conditions, overcoming inundation, bettering the natural environment and hygienic conditions in the areas Quy Nhon city. In the process of urbanization and modernization of the city, the implementation of this Project proves to be necessary, thereby contributing to the sustainable development of Binh Dinh province in general and the city of Quy Nhon in particular.

72. The contents of EIA report comply with the current requirements for environmental impact assessment stipulated by the Vietnamese Government and WB's policies. The report will be one of the key documents to be submitted to State management agencies in charge of the environment to determine the location and scope of the work as a basis for applying for a project investment license. In addition, this is also an important document helping in project appraisal and in the negotiation and signing of the loan agreement between the Government of Vietnam and the World Bank.

2. Recommendation

73. This is an environmentally significant project, aiming at future sustainable development, and also one of the prerequisites of socio-economic development in Binh Dinh province in general and Quy Nhon city in particular. Therefore, the Owner would like to propose for DONRE's appraisal and approval of the EIA report of the Project as well as WB's approval for timely and prompt deployment of the project

3. Commitment

74. The Client commits to carrying out environmental protection and mitigation measures as mentioned in Chapter 5 and implementing the environmental management and monitoring program for the Project as mentioned in Chapter 6, and fulfilling commitments towards the communities specified in Chapter 7. The Owner also commits to make compensation and overcoming environmental pollution once environmental incidents and risks occur during the implementation of the Project, and taking steps of environmental recovery in accordance with to legal regulations on environmental protection when project operation has been completed

APENDIX 1. GENERAL PLAN FOR CONSTRUCTION ITEMS OF CCSEP PROJECT – QUY NHON CITY SUBPROJECT

