

Extension of the Project
Tan Hoa - Lo Gom Canal Sanitation & Urban Upgrading
Ho Chi Minh City - Vietnam

TECHNICAL and FINANCIAL FILE

Table of contents

ABBREVIATIONS	4
SUMMARY	6
1. DESCRIPTION OF THE PROJECT	7
1.1. Context of the Project.....	7
1.2. General objective	8
1.3. Specific Objectives	8
1.3.1. Solid waste collection and dumping have been organized up to acceptable standards and evaluated in view of their replicability.....	8
1.3.2. Canal infrastructure and housing facilities in THLG canal area have been improved and evaluated in view of their replicability.....	8
1.3.3. The waste water of the DEN canal has been treated through aerated lagoon technology and evaluated in view of its replicability	8
1.3.4. Socio-economic support and capacity building have been enhanced.....	8
1.4. Intermediate Results and Activities.....	8
1.4.1. Solid waste collection and dumping have been organized up to acceptable standards and evaluated in view of their replicability.....	8
1.4.1.1. Background.....	8
1.4.1.2. Intermediate Results and Activities	9
1.4.1.3. Budget.....	10
1.4.2. Canal infrastructure and housing facilities in THLG canal area have been improved and evaluated in view of their replicability.....	10
1.4.2.1. Background.....	10
1.4.2.2. Intermediate Results and Activities	11
1.4.2.3. Budget.....	15
1.4.3. The waste water of the DEN canal has been treated through aerated lagoon technology and evaluated in view of its replicability	15
1.4.3.1. Background.....	15
1.4.3.2. Intermediate Results and Activities	16
1.4.3.3. Budget.....	17
1.4.4. Socio-economic support and capacity building have been enhanced.....	18
1.4.4.1. Background.....	18
1.4.4.2. Intermediate Results and Activities	19
1.4.4.3. Budget.....	21
1.5. Beneficiaries	21
2. PRECONDITIONS, ASSUMPTIONS AND RISKS	22
2.1. Preconditions.....	22
2.2. Activities assumptions and risks.....	22
2.2.1. Solid waste collection and dumping have been organized up to acceptable standards and evaluated in view of their replicability.....	22
2.2.2. Canal infrastructure and housing facilities in THLG canal area have been improved and evaluated in view of their replicability.....	22
2.2.3. The waste water of the DEN canal has been treated through aerated lagoon technology and evaluated in view of its replicability	23

3.	PROJECT IMPLEMENTATION	23
3.1.	Budgetary means.....	23
3.1.1.	Solid waste collection and dumping have been organized up to acceptable standards and evaluated in view of their replicability.....	23
3.1.2.	Canal infrastructure and housing facilities in THLG canal area have been improved and evaluated in view of their replicability.....	23
3.1.3.	The waste water of the DEN canal has been treated through aerated lagoon technology and evaluated in view of its replicability	23
3.1.4.	Socio-economic support and capacity building have been enhanced.....	23
3.2.	Human means.....	24
3.3.	Management and Implementation Modalities.....	24
3.3.1.	Project Management Unit	24
3.3.2.	Implementation modalities.....	25
3.3.3.	Implementation period	26
4.	PROJECT MONITORING AND EVALUATION.....	27
4.1.	Monitoring Modalities	27
4.1.1.	Steering Committee	27
4.1.2.	External Evaluation Missions	27
4.1.3.	Mid-term review	28
4.2.	Means of Verification	28
5.	FINANCIAL FILE.....	29
6.	ANNEXES	35
6.1.	Logical Framework.....	35
6.2.	Schedule of activities.....	40
6.3.	ToR of the PMU staff.....	45
6.3.1.	PMU Coordination.....	45
6.3.2.	Urban Unit	47
6.3.3.	Lagoon Unit	48
6.3.4.	Social Unit	48
6.4.	International and Local Technical Assistance.....	49

Abbreviations

ADB	Asian Development Bank
BADC	Belgian Administration Development Co-operation
BC	Binh Chanh district
BEF	Belgian Francs
BHH	Binh Hung Hoa Ward in Ho Chi Minh City
BTC	Belgian Technical Co-operation
CAO	Chief Architect's Office
CAD	Computer Assisted Design
CVF	Counter Value Fund
DDS	Detailed Design Study
DGIC	Directorate General of International Cooperation
DPI	Department of Planning and Investment
DTCPW	Department of Transport, Communication and Public Works. (Also known as Department of Communications and Public Works)
DCLH	Department of Cadastre, Land and Housing
DoSTE	Department of Science, Technology and Environment
EIA	Environmental Impact Assessment
FD	Final design
FS	Feasibility Study
HCMC	Ho Chi Minh City
GDP	Gross Domestic Product
GIS	Geographical Information System
GoB	Government of Belgium
GoV	Government of Vietnam
HH	Household
IAP	Impact Action Plan
IDA	International Development Association (of the World Bank Group)
JBIC	Japan Bank for International Cooperation
JGF	Japanese Grant Fund
JICA	Japan International Co-operation Agency
LCHU	Low Cost Housing Upgrading
KT	Residence Status Categories (KT1, KT2, KT3, KT4)
md	man/day
mm	man/month
MoSTE	Ministry of Science, Technology and Environment
MOF	Ministry of Finance
MP	Master Plan
MPI	Ministry of Planning and Investment
NLTN	Nhieu Loc-Thi Nghe (Basin or Canal)
NGO	Non-government Organisation
NU	Neighbourhood Unit

ODA	Official Development Assistance
ODAP	Official Development Assistance Partnership – (an association that aims to co-ordinate ODA inputs in Vietnam).
O & M	Operations and maintenance
PAP	Project Affected People
PC	People’s Committee
PCHCMC	People’s Committee of Ho Chi Minh City
PMU	Project Management Unit
PMU 415	Project Management Unit for the initial Tan Hoa – Lo Gom Basin urban up-grading and sanitation
PFS	Pre-feasibility Study
PM	Prime Minister
SA	Specific Agreement
SC	Steering Committee
STS	Small Transfer Station
SW	Social Worker
TA	Technical Assistance
THLG	Tan Hoa – Lo Gom (Canal or Basin)
ToR	Terms of Reference
Vnc	Vietnamese contractor
VND	Vietnamese dong
UDC	Urban Drainage Company
UNCHS	United Nations Centre for Human Settlement
UNDP	United Nations Development Programme
UPI	Urban Planning Institute
UPWE	Urban Public Works Enterprises (at District level)
USD	United States Dollar
WB	World Bank
WWTP	Waste Water Treatment Plant

Summary

Title

Extension of the Tan Hoa – Lo Gom (THLG) Canal Sanitation and Urban Upgrading Project in Ho Chi Minh City – Vietnam

General objective

The quality of life related to environmental and urban development issues for the people living in urban areas has been improved.

Specific objectives

- Solid waste collection and dumping have been organized up to acceptable standards and evaluated in view of their replicability;
- Canal infrastructure and housing facilities in THLG canal area have been improved and evaluated in view of their replicability;
- The waste water of the DEN canal has been treated through aerated lagoon technology and evaluated in view of its replicability;
- Socio-economic support and capacity building have been enhanced.

Duration: 39 months

Budget:

The global budget:	17,374,785 EUR	(236,818,320,000 VND)
Belgian contribution:	6,090,717 EUR	(83,016,473,000 VND)
Vietnamese contribution:	8,030,876 EUR	(109,460,840,000 VND)
Counter Value Fund:	3,253,192 EUR	(44,341,007,000 VND)

Beneficiaries

The 600,000 inhabitants in the Tan Hoa - Lo Gom canal basin, 120,000 inhabitants in the Den canal basin and the departments and institutions of Ho Chi Minh City dealing with environment and urban planning.

Working Area

Tan Hoa - Lo Gom canal basin and the Den canal basin in Ho Chi Minh City, Vietnam

1. Description of the project

1.1. Context of the Project

Ho Chi Minh City (HCMC) is the largest city in Vietnam in terms of area, population and economic activities. Located in the southern part of the country, its administrative area of 2,029 km² is divided into 17 urban districts (790 km²) and 5 semi-urban districts.

The City's drainage network consists of about 92 km of canals and streams, 530 km of closed conduits along the major roads and about 450 km of small sewers, which are installed along minor roads and streets. The drains collect and convey both wastewater and storm water runoff to natural streams and man-made canals; these in turn drain into main rivers.

The rivers and canals not only perform a function of drainage but also contribute to transportation, environment and urban landscape in general. The river and canal banks constitute also the City areas where the concentration of slums and urban poor is the highest.

These waterways are heavily polluted by domestic and industrial wastewater and by solid waste dumped into the canals. The drainage system is inadequate, serving only the older built-up districts. Furthermore, due to the shortage of funding over many years, there has been little maintenance and repair of the system. As a result, the condition of the system has deteriorated, causing flooding in more than 50 flood-prone areas for one to two days on average during the rainy season.

In order to overcome these problems, the City authorities invited major donor agencies for technical and financial assistance. It is in this context that Vietnam and Belgium signed on June 25, 1997 the Specific Agreement on the bilateral development co-operation project "Tan Hoa – Lo Gom canal sanitation & urban upgrading". The Tan Hoa – Lo Gom (THLG) canal is one of the most heavily polluted canals of HCMC. Its catchment covers an area of approximately 16 km² with a population of over 600,000 inhabitants.

The "THLG canal sanitation & urban upgrading project" was initially planned over a three-year implementation period, with a total budget of 220 million BEF (5,453,657.55 EUR) of which 175 million BEF (4,338,136.68 EUR) granted by Belgium and the equivalent in Vietnamese Dong (VND) or 45 million BEF by Vietnam. It started in April 1998 and was extended with five months until 30 September 2001.

The project aimed at the improvement of the quality of life in the THLG basin, especially along the canal, by reducing the pollution and environmental degradation and by increasing economic and community development activities. It also targeted the strengthening of the capacity of the community, elected officials and other stakeholders in the Districts of the project area, as well as of the City institutions, to deal with problems related to canal pollution, environmental degradation and urban development in general. The project was defined as a study project, starting with in-depth analysis of the situation and proposing appropriate solutions in the fields of solid waste, canal bank upgrading, wastewater treatment, institutional strengthening, urban upgrading and socio-economic development. Some of the proposed solutions are to be pilot-tested. The specific project approach, recognising the links between the various problems and building in-depth discussions with the citizens and the institutional actors, gained full recognition of the City authorities and other donors. However, the pace of the preparatory work has been slow. Overall disbursements have been low (32%) and the implementation of most pilot projects has not started yet. This was due to several causes including the comprehensive approach itself, long administrative procedures on both sides and extensive preparatory work required per pilot project.

The present project is an extension phase of the first project during which some of the proposed solutions will be tested. Hereinafter this new phase will be referred to as "the Project". The balance of the first phase will be transferred to the extension phase.

1.2. General objective

The quality of life related to environment and urban development issues for people living in urban areas has been improved.

The general set up of the Project consists of testing solutions in pilot-projects, hence for each pilot-project a specific objective has been established.

1.3. Specific Objectives

1.3.1. Solid waste collection and dumping have been organized up to acceptable standards and evaluated in view of their replicability

1.3.2. Canal infrastructure and housing facilities in THLG canal area have been improved and evaluated in view of their replicability

1.3.3. The waste water of the DEN canal has been treated through aerated lagoon technology and evaluated in view of its replicability

1.3.4. Socio-economic support and capacity building have been enhanced

1.4. Intermediate Results and Activities

1.4.1. Solid waste collection and dumping have been organized up to acceptable standards and evaluated in view of their replicability

1.4.1.1. Background

This pilot project was designed in the first phase of the THLG project under the strategy 1: Solid-waste collection and recycling. The planned and implemented activities under the initial project were described in detail in activity reports and technical reports during the initial project. Hereafter figures a brief review of the progress and achievement at the end of the first phase:

	Strategy	Activities	Location	Planned	Progress
1	Solid waste	Primary collection system improvement (Pilot Project)	D6 - W 3, 4, 7, 8, 11	Reorganisation of solid waste collection and purchase of small equipment	- Survey completed in all wards -W8 reorganised and uniforms supplied. - Cart prototypes designed and tested.
2	Solid waste	STS – small transfer station (Pilot Project)	Ba Lai, W7, D 6	Building a STS using pits and non-compacting technology	Detailed design and tender for the construction of the STS completed.
3	Solid waste	Industrial solid waste reduction (Pilot project)		See Specific Agreement of the First phase	Preliminary investigations done. Decision taken to abandon the pilot project.
4	Solid waste	Industrial Environmental Information centre		See Specific Agreement of the First phase	Same as above (3).

a) Primary collection of solid waste

The primary collection system is a crucial component of waste management and should be under the responsibility and the control of public authority. The responsibilities of City and District overlap, as well as those of the formal and informal sector causing a major weakness of the present system. During the first phase, the waste collection system has been reorganised in an integrated way under the direct responsibility of the District and its Wards. During the Project, new collectors cooperatives will be established and new collection routes will be developed.

In Wards 3, 4, 7, 8 & 11 of District 6, surveys on collection of domestic solid waste have been conducted. Cart prototypes have been designed and tested.

In Ward 8, the new model of primary collection of domestic solid waste has been implemented. Social activities have been initiated in collaboration with the Ward authorities and the population. Awareness raising campaigns for reducing the volume of solid-waste dumped in the canal were conducted. A cooperative of 25 collectors has been established and equipped with protection uniforms. Up to 71 % of the 4,746 households are covered by the collection system while the income of the collectors has increased.

In Ward 7, sensitisation activities were launched. A cooperative of 17 collectors was organized, which covers 80 neighbourhoods, with an average of 40 households per neighbourhood cell. Up to date, 1,976 households have already subscribed to the collection fees.

b) Small transfer station (STS):

The current solid waste collection system is composed of 4 steps: the primary collection system, rendezvous points, a larger transfer station and the transport to the land field. The purpose of "small transfer stations" is to combine the second and the third step. The STS will reduce the waiting time at rendezvous points and the traffic jam caused by the tricycles at these points. The transfer of the waste from the STS to larger stations will be operated during the night, by container trucks in a hygienic way. It is optimal to have a STS covering an area of 1.5 km radius. If evaluated positively, a network of similar STS will be proposed throughout the city, to be built under an ADB-funded project.

A final design for a STS has been approved. Land acquisition procedures started. The land is vacant and acquisition procedures are simple as there are no compensations to be paid. The detailed design and the tender for the construction of the STS have been completed.

1.4.1.2. Intermediate Results and Activities

The intermediate results and activities started in the first phase will be extended and finished by:

a) The primary collection of solid waste in the Wards 3, 4, 7, 8 and 11 of District 6 has been improved.

- Creation of new collector cooperatives
- Extension of collection routes in Wards 3, 4, 7, 8 and 11
- Production and supply of the cyclo carts
- Supply of uniforms and other materials to the cooperative members

b) A Small Transfer Station (STS) has been constructed and put into operation in Ward 7 (Ba Lai area)

- Construction of STS according to the final design mentioned above
- Supply of the mechanical equipment to the STS, including two trucks, to transport the solid waste from the STS to the dumping site at night
- Training of STS operators: (Public Works Service of District 6)
- Hand over to District 6 and HCMC

c) Solid waste collection and dumping have been evaluated in view of their replicability

- Technical evaluation
- Financial audit
- Publication and communication of the results of the evaluation to all stakeholders.

1.4.1.3. Budget

This pilot project will be entirely financed by the Belgian contribution. The total budget needed for these activities is estimated **at 530,300 EUR (7,227,989,000 VND)**. The detailed cost estimates can be found in the financial file (section 5).

1.4.2. Canal infrastructure and housing facilities in THLG canal area have been improved and evaluated in view of their replicability

1.4.2.1. Background

The canal infrastructure pilot project was designed in the first phase of the THLG project under the strategy 2: canal improvement. Hereafter figures a brief review of the progress and achievement at the end of the first phase:

	Strategy	Former Pilot Project	Location	Planned	Progress
1	Canal upgrading	Canal embankment	W 11, D 6	Canal enlargement up to 24m-width with 12m technical band, using slope and vertical embankment with floating pontoon for boat unloading. In total 340m of embankment.	Surveys, social activities, preliminary designs done. FS submitted to PCHCMC. Detailed design ongoing.
2	Urban Planning	Basic Infrastructure	W 11, D 6	Construction of roads, water supply and distribution, electricity, drainage	Surveys, social activities, preliminary designs done. FS submitted to PCHCMC. Detailed design ongoing.

The housing pilot project regroups former pilot projects designed in the initial project of the THLG project under the strategy 6: urban planning (housing), strategy 7: socio-economic support (market).

Hereafter figures a brief review of progress and achievements after the initial project:

	Strategy	Former Pilot Project	Location	Planned	Progress
1	Urban Planning	Construction of 200 apartments	W 11, D 6	Low rise, high density buildings with leisure activities, a park and a community building	Surveys, urban planning workshops, social activities, preliminary designs done. FS submitted to PCHCMC. Tender for detailed design done.
2	Socio-economic support	Shops, hawkers market and a building for small factories	W 11, D 6	Development of economic activities for the relocated people	Same as above
3	Urban Planning	Land with services for 150 plots	W Binh Hung Hoa, D BC	Construction of 40 m ² plots with basic facilities: stabilised gravel roads, sewage, running water, electric connection	Survey on relocation options of the population. Agreement with the City on the location of the project. Drafted preliminary design. FS has not yet started.
4	Urban Planning	Relocation policy included in pilot project (Ward 11)	W11, W Binh Hung Hoa	-	Draft proposal for regulations on relocation, compensation, subsidies and loans.

1.4.2.2. Intermediate Results and Activities

a) The canal infrastructure in Ward 11 has been improved.

- Tender & selection for final design (embankment and landscaping)
- Final design, construction procurement documents (dredging, enlargement, embankments, infrastructure and landscaping).

The tenders for design and construction of the apartments will coincide with the tenders for the infrastructure in the area.

- Dredging, enlargement and embankment works are executed

Embankment construction works will be executed over 340 m in total, from Tan A Agrex Company until the future Cho Lon Bridge. In order to facilitate boat transportation in the first 2 km of the canal, the canal will be enlarged in key places. In Ward 11, the canal will have a width of 24 meters between the top of the slope banks, while the bottom of the canal will be 10.5 m wide, in order to ensure the navigation of 50 T vessels until the bridge of the Agro-product factory.

The project will build vertical banks over the 86 m in front of the former Agro Product factory in order to create a small port with floating pontoons, linked to the bank by moving ramps. The port will be linked to the market activities. Waste storage and toilet facilities will be provided to the boat owners.

The existing bridge in front of the Agro Factory must be kept as long as the new bridges planned in the different Master Plans have not been built. Therefore, the embankment around the bridge will be adapted in order to preserve the bridge, while being easy to be demolished in the future.

- Related infrastructure facilities are built

The Project will build a road along the canal that will be linked with the future Cho Lon Bridge and the present Hau Giang Bridge. This road will also be linked to alleys on the site (alleys nr 241 and nr 405).

Around the site, 7 m wide roads will be accessible to both cars and motorbikes. Two smaller roads (5m width in total) will serve the residential areas in order to avoid transit traffic. They will be only accessible to motorbikes and emergency cars and trucks. Along these alleys trees and green spaces will be provided as well as a large drainage system. Within the apartment blocks cloisters playground for children and private motorbike parking will be provided. Finally, several pedestrian paths will cross the site, allowing East-West junction through the park. Another pedestrian shopping area is leading to the hawkers market with natural shading (trees) and covered shopping arcades. A pedestrian promenade will be also provided along the canal.

The roads will be built of different materials such as asphalt for the car roads and specific architectonic concrete pavements for the alleys reserved for motorbikes and pedestrians.

- Handover to HCMC and the District 6

After the handover, the District will be responsible for the operations and maintenance (O&M) of the infrastructure and the facilities. The planned infrastructure works on the canal imply that 350 families will have to be relocated. A detailed survey of the families to be relocated has been completed in July 2000. The families were divided in 2 groups: the first group will be moved to apartments in the same ward 11, the second group will be moved to a site and services area in Binh Hung Hoa.

b) Housing facilities in Ward 11 have been improved.

- Final design of the construction of the apartments and the related infrastructure

The site is located in Ward 11, District 6 with the following boundaries:

- On the North, the proposed Cho Lon street;
- On the East, the Tan Hoa – Lo Gom canal (Ong Buong);
- On the West, the existing resident area;
- On the South, the existing resident area.

Several technical and socio-economic studies were undertaken during the initial phase of the project. The main results are presented in the document “Tan Hoa - Lo Gom Analysis - Results for the definition of PMU 415 Pilot Projects”. In substance the new housing facilities in Ward 11 consist of:

Apartment blocks

A complex of 200 apartments will be built in two phases for a total surface of 0,9757 ha of which around 76 % will be reserved for the living area (both residential and selling areas) while the remaining will be allocated to the circulation, parking and storage.

The blocks will be subdivided into smaller units of 15 to 30 apartments with a variety in design. With an average of 5 people living in each apartment, the beneficiary population would be around 1,000 inhabitants.

All the project area will be above the maximum levels of the floods. The buildings will vary from Ground floor + 2 storeys to G + 4 storeys, maximum.

Shopping arcade on the ground floor of some apartment blocks

The shops will be constituted of 35 m² to 60 m² cells, located on the ground floor of the apartment blocks and presenting an arcade area connected to the pedestrian alleys. Some shops will be designed to include the living area on the backside of the room and/or on a mezzanine. The owners will build the partition wall between the two functions.

Market

The entire market floor will be above flood level (minimum 60 cm above the new ground level) with access for the goods and disable people and emergency exits. The public alleys will be minimum 2m wide while some main access will be minimum 4m wide.

Relocated families will have priority to lease a stall in the market at low rental conditions, to be specified by the compensation committee.

Building for small and non-polluting factories.

This building will be a warehouse type with good external finishing and will house small non-polluting factories. Modular divisions will be built in the building. Each box will be accessible to truck supply. The total free height will be 5m maximum. Special care will be given to prevent potential nuisances and pollution (noise, air and water pollution). As for the market storage, garbage room, toilets, natural light and good ventilation will be provided.

The market and the industry building will not exceed 0.2117 ha altogether.

Public spaces

The project will integrate different public spaces in its layout:

- a) A small green park in the north-west side of the project;
- b) A recreational park in the centre, playgrounds and sports fields;
- c) Motorbikes parking as covered buildings within the green spaces;
- d) A small community building for celebration activities.

Other facilities

An electricity transfer substation will be built to serve the new apartment buildings. The public areas (streets, market, pedestrian areas) will have appropriate public lighting. A reserve water tank for drinking purposes and fire protection will be built to serve the new apartments. The location of the underground reservoir will be separated from septic tanks or any other type of polluting sources.

- Tender and selection of the contractor for the construction & the equipment will be organised
- Construction of 70 apartments and related infrastructure (phase 1)
- Relocation of 70 households
- Construction of 130 apartments and related infrastructure (phase 2)
- Relocation of 130 households

- Construction of the market, industrial building, public spaces and other facilities
- Handing over of the infrastructure to the PCHCMC and the district

After the handover, the District will be responsible for the operations and maintenance (O&M) of the infrastructure and the facilities. Specific attention shall be given to the regularity of the water supply, the solid waste collection, clearance of the canal banks.

c) A site and services area in Ward Binh Hung Hoa has been constructed

- Execution of the Vietnamese Feasibility Study
- Tender and selection for the final design and work supervision on the "site and services" area and market

The "site and services" pilot project intends to relocate the poorest Project Affected People (PAP) in THLG basin (Ward 11) in Ward Binh Hung Hoa. The land identified for the Site & services is located along the existing ponds and the future Lagoon; it is currently free of occupation, and only 8 km from the current settlement of the households.

The infrastructure to be provided includes land filling, basic stabilised gravel road, drainage, sewers, electrical connection, and water supply through a drilling and pressure tank. The infrastructure provided for the Ward 11 population will also benefit the host population of Ward BHH.

After the handover, the District will be responsible for the operations and maintenance (O&M) of the infrastructure and the facilities.

- Execution of final design
- Tender and selection of the contractor for the construction & the equipment
- Technical supervision of the works
- Construction of infrastructure for 150 plots

Plots of approximately 40 m² will be allocated to 150 households.

- Construction of the market

To stimulate economic activity, a market will be built located at the crossroad adjacent to the 'sites-and-services' area. The relocated population will be given priority in acquiring the small stalls.

- Attribution of loans for housing construction

Micro-credits of maximum 16,000,000 VND/household will be attributed to the people relocated in Ward BBH to support their efforts in building their houses. The project will transfer the credit to a special account opened by the Ward management committee. The procedures for micro-credit were already set-up during the first phase of the project and successfully tested.

- Relocation policy proposal
- Lawyer support for relocation and loans attribution
- Elaboration of maintenance modalities negotiated with the authorities involved
- Short term technical assistance for capacity building

- Handing over of the infrastructure to the PCHCMC and the district

d) The improved canal infrastructure and housing facilities have been evaluated in view of their replicability

- Technical evaluation of the preparation, the executions and results, taking into account the interests of all stakeholders and the social and economic impact
- Financial audit
- Publication and communication of the results of the evaluation to all stakeholders.

1.4.2.3. Budget

The Belgian and Vietnamese contributions and the Counter Value Fund will finance these pilot projects. The total budget needed for the above mentioned activities is estimated **at 8,035,800EUR (109,527,954,000 VND)**. The detailed cost estimates can be found in the financial file (section 5).

1.4.3. The waste water of the DEN canal has been treated through aerated lagoon technology and evaluated in view of its replicability

1.4.3.1. Background

The activities in the first phase of the THLG project under the strategy 3, Wastewater treatment, are described in detail in the Project Specific Agreement, in the Project Extension identification report, in PMU 415 activities report and other technical reports.

Hereafter figures a brief review of progress and achievements:

	Strategy	Former Pilot Project	Location	Comments
1	Wastewater treatment	Boat transportation and tide effect study	THLG canal	Boat navigation system study of HCMC and THLG canal in particular
2	Wastewater treatment	Hydraulic study	THLG canal	Hydraulic study of the THLG canal and its basin
3	Wastewater treatment	Wastewater analysis	THLG and Den canal	Analysis of the water quality of THLG canal
4	Wastewater treatment	Feasibility study for the THLG basin	THLG basin	Project set-up as a separate but complementary study to the THLG extension

With regard to the aerated lagoon the following activities took place:

- a) Complete topographical survey of the 36 ha site
- b) Belgian Feasibility study.
- c) Vietnamese Feasibility study.
- d) A flow measurement campaign of the canal (since April 2000).
- e) Analyses of the water quality of the Canal

The main section of the canal is around 4 km long and it presently receives domestic wastewater of some 120,000 people (785 ha), with extension to 160,000 people in 2010. In addition to this, an unknown amount of industrial wastewater is discharged into the canal, mainly without any treatment.

1.4.3.2. Intermediate Results and Activities

a) An aerated lagoon wastewater treatment plant for Ward Binh Hung Hoa, Binh Chanh district, has been studied and designed

- Vietnamese Feasibility Study

According to the studies during the first phase of the project, it was admitted that given the extent of the pollution in THLG-canal and the population density of the area, the implementation of the lagoon technology for treating the wastewater in this location was not suitable.

Therefore a study will be organized to investigate different wastewater treatment alternatives for the Den canal flowing from east to west through Tan Binh District and Binh Chanh Suburb. The Vietnamese FS will provide the necessary approvals for the location, land use, land acquisition and land attribution.

- Land acquisition

The land, identified for the implementation of the lagoon, is located on both sides of the polluted Den canal. It is a natural wetland of around 35.6 ha. Compensations for land and lost assets will be paid by the Vietnamese budget of the project.

- Elaboration of ToR for the Detailed Design Study

The terms of reference for the detailed design study of the lagoon will pay special attention to urbanisation control, green space preservation and infrastructure improvement of the whole area including the “sites and services” relocation area. (roads, drainage, wastewater treatment and water supply).

The DDS will be divided in two parts:

- An industrial survey and other investigations in order to review all assumptions of the preliminary design;
- The detailed design, including plans, technical specifications and tender documents

- Execution of the Detailed Design Study (DDS)

The Detailed Design Study by an international consultant in co-operation with the Urban Drainage Company (UDC); will take some nine months.

b) An aerated lagoon wastewater treatment plant for Ward Binh Hung Hoa, Binh Chanh district, has been constructed and made operational

- Construction of the lagoon and installation of the necessary equipment
The works including earth works, electrical and electro-mechanical works, will be adjudicated after international tendering. The implementation will take some six months, during the dry season.
- Monitoring programme by Vietnamese universities and other institutes to follow-up the effects of the lagoon on water quality, lotus production and health conditions
- Handover to the UDC
The delivery will take place at the end of the works and after test run and completing the Operation and Maintenance training of the lagoon chief and his assistant.

c) Institutional capacity building concerning waste water treatment has been assured

- Short term technical assistance, totalising 5 man-month, will be provided to
 - Elaboration of the ToR for the DDS.
 - Review all reports during DDS.
 - Help PMU for technical approval.
 - Help PMU for pre-qualification of contractors. Help in the choice of the contractor.
 - Assist PMU during negotiation with the contractor.
 - Assist PMU during the implementation of the works
- Assist PMU during the first year of operation (evaluate the results on regular basis (every 3 months) during the first year of implementation, propose technical and administrative solutions to improve the system).
- Training and study tours of the lagoon operators (2 x 2 persons for a 3 month training)
- Operation and Maintenance training of the lagoon operators by the contractor

d) The aerated lagoon has been evaluated in view of its replicability

- Technical evaluation of the preparation, the executions, results and maintenance, taking into account the interests of all stakeholders and the social and economic impact
- Financial audit
- Publication of the results of the evaluation
- Communication of the results of the evaluation to all stakeholders.

1.4.3.3. Budget

The Belgian and Vietnamese contributions will finance these pilot projects. The total budget needed for the above mentioned activities is estimated **at 5,787,500 EUR (78,883,625,000 VND)**. The detailed cost estimates can be found in the financial file (section 5).

1.4.4. *Socio-economic support and capacity building have been enhanced.*

1.4.4.1. *Background*

The planned and implemented activities under the first phase of the project are described in detail in the Project Specific Agreement, in the Project Extension identification report, in PMU 415 activities report and other technical reports.

Hereafter figures a brief review of progress and achievements after the first phase:

	Strategy	Activity	Location	Achievements
1	Awareness raising	Video film and TV spots	HCMC TV	2 TV spots have been designed
2	Awareness raising	School awareness	W 8, 11, D 6	Environmental awareness raising activities within the school curriculum was introduced in 2 primary schools
3	Institutional strengthening	Study tour, seminars and workshops	HCMC and Asia	Study tour in Singapore, Thailand, China (Kunming) & Indonesia. Seminars in Agra, Cambodia (Phnom Penh). Several workshops in HCMC
4	Institutional strengthening	Aerial pictures survey	D 6, 11, TB, D8, BC	Aerial pictures accomplished. Digitalising of orthophotos partly completed.
5	Community Participation	Community participation activities	W 3, 4, 7, 8, 11, D 6	A team of social workers supports community participation activities for the implementation of the pilot projects related to solid waste, awareness raising, urban improvement, socio-economic support
6	Community Participation	Population information	W 7, 11, BHH	Through brochures and meetings the population has been informed about the project evolution, the problems of eviction, compensation and resettlement
7	Institutional strengthening	Geographic information system	D 6	Integration of all the data related to the project within a GIS and development of urban studies accomplished.
8	Urban planning	Relocation policy study	W 11, D 6, W BHH, D BC	Study of the relocation policy, the housing ownership and maintenance, the compensation policy in final phases.
9	Socio-economic support	Socio-economic surveys	D 6, 11, TB / W 11, D 6	General socio-economic survey over the population along the canal and in-depth survey of the population affected by the relocation accomplished.

10	Socio-economic support	Job creation	W 11, D 6	Loans provided to enterprises that guarantee to engage more workers.
11	Socio-economic support	Micro-credit	W 11, D 6	Saving initiative and credit support for the development of small economic activities among the relocated people implemented.

1.4.4.2. Intermediate Results and Activities

a) Environmental awareness of the HCMC population has been enhanced through awareness raising activities

- Continuation and extension of the programme of awareness raising activities in schools involved in the first phase

The purpose is to sensitise the children and their parents on simple and practical actions for the preservation of their environment that they can themselves enact, as well as communicate to their families. The teachers of the Pham Van Chi school (Ward 8) and Phu Dong school (Ward 11) already involved in education of environment during the first phase of the project will be the master trainers for new primary schools in Wards 3,4,7 and BHH. Pedagogical material (books, games,) on environmental protection will be made and supplied to the primary schools.

- Production of new short films and TV spots on local television of HCMC covering the complete evolution of the different pilot projects of STS, Ward BHH and Ward 11

b) Community participation has been strengthened

- Recruitment of the team of social workers involved in the first phase for the entire implementation period of the Project

Social workers, recruited during the first phase of the project will continue to organise activities with local authorities (wards and neighbourhood leaders, the police, mass organisations...) and the population, enabling the PMU to propose solutions taking into account the opinion of all stakeholders. In addition, all parties will become aware of the concerns and problems of other parties concerned for the same issue.

- Extension of the community participation activities of the initial phase to Wards 3, 4, 7, 8, 11 and Ward BBH

Community participation is a key element to improve the primary collection of solid waste, resettlement issues, the environment awareness raising, the slum improvement, the socio-economic support.

- Legal support to the relocated population

Different surveys among the population will be conducted in order to collect detailed information of all the families to be relocated. Suggestion boxes and exposition panels will be set up in the Wards, explaining the project plans.

c) Socio-economic support activities have been intensified

- Extension of credit for job creation activities

This activity aims at creating stable jobs for the poor by offering a loan to small enterprises in order to hire more workers. This activity was already implemented in Ward 11 and will be extended to other wards.

- Extension of vocational training activities

In collaboration with the Centre for Vocational Training of District 6, training sessions for the population will be organised in the fields of sewing, metal cutting, mechanics, lathe operating, electricity, moulding, etc.

- Extension of saving groups and micro-credit activities

Micro-credit will be provided to eligible saving groups, which have demonstrated management capacities and the ability to save a minimum of 1.5 million VND. The Project will provide credit equivalent to the amount saved by the group. Modalities for attribution, use and refunding of the micro-credit have been set-up during the first phase, tested and analysed.

d) Institutional capacity of the relevant institutions has been strengthened through training and seminars

- Organisation of training sessions and study tours in the fields of environment, urban planning and procurement
- Dissemination of project experience through seminars and workshops
- Update of GIS maps and CD-Rom

An aerial picture survey of the basin was conducted in 1999. Some of these pictures have been digitised and the graphical information has constituted the base of a Geographic Information System (GIS) that has integrated all the results of the PMU studies and survey. These maps and CD-Rom will be updated during the second phase.

- GIS training will be provided to and by the GIS operator of the PMU

e) Close collaboration between the departments of the city and projects funded by other donors has been assured

- Active participation of the PMU in organising and participation of ODAP meetings, workshops, training activities, information campaigns

The Official Development Assistance Partnership (ODAP) was set up as a formal strategic partnership between the HCMC People's Committee and a group of key international donors: the World Bank, the United Nations Development Programme, the Asian Development Bank, the International Finance Corporation, the Japanese Bank for International Co-operation and the Belgian Co-operation (DGIC and its executing agency BTC). The Belgian Cooperation officially joined the ODAP in November 1999.

ODAP's mandate, beside co-ordination of donor support, includes support to policy development, strategic planning and operational practice and operates thanks to membership fees of the members.

- Budgetary support to ODAP training sessions, meetings and secretariat

During the first phase of the Project, Belgian support to ODAP was provided through organising workshops and providing information and training activities useful to all stakeholders working in the areas of urban planning, environmental upgrading and institutional strengthening. The PMU 415 had a leading role in many activities and collaborated intensely with ADB for solid waste and WB for the FS and Low Cost Housing Upgrading. PMU 415 will continue their leading role during the extension phase.

e) **Socio-economic activities have been evaluated in view of its replicability**

- Technical evaluation and financial audit taking into account the interests of all stakeholders and the social and economic impact
- Publication and communication of the results of the evaluation to all stakeholders.

1.4.4.3. Budget

The disbursement under strategy "capacity building and awareness raising" amounted to 65.5% of the initial budget under the Belgian grant and 40% under the Vietnamese counterpart. The total budget needed for the above mentioned activities is estimated **at 588,300 EUR (8,018,529,000 VND)**. The detailed cost estimates can be found in the financial file (section 5).

1.5. Beneficiaries

1. The solid waste management project will improve the environmental condition of over 7,000 households.
2. Through the construction of the Waste Water Treatment Plant, the sanitation conditions of around 120,000 people will be improved.
3. The relocation projects will directly improve the housing conditions of 350 poor households living along the Tan Hoa-Lo Gom canal, in one of the poorest districts and slums of the inner City (District 6).
4. Indirectly the whole population of HCMC will benefit from the pilot experiences of the THLG / Den Canal pilot projects in terms of alternative solutions for housing and sanitation.
5. The city departments and authorities (Ward, District, City) will benefit from capacity building programmes.

2. Preconditions, assumptions and risks

2.1. Preconditions

- The Steering Committee and Project Management Unit have been set up properly with qualified and competent staff (see chapter 3 & 4).
- Adequate human and operational resources have been appointed
- Project accounts have been opened and a consolidated accountability system has been established.
- The previous authorisations by the Government of Vietnam for sub-projects in the first phase of the project remain valid.

2.2. Activities assumptions and risks

The assumptions and risks related to the different activities are detailed in this chapter. Only the assumptions related to the results are detailed in the logical framework.

2.2.1. Solid waste collection and dumping have been organized up to acceptable standards and evaluated in view of their replicability

- a. The primary collection of solid waste in the Wards 3, 4, 7, 8 and 11 of District 6 will have been improved if**
 - the accessibility of the carts to the households can be assured;
 - the domestic volume per household does roughly remain the same.
- b. A Small Transfer Station (STS) will have been constructed and put into operation in Ward 7 (Ba Lai area) if**
 - the land for the STS will be timely available;
 - the accessibility of the carts to the STS can be assured.

2.2.2. Canal infrastructure and housing facilities in THLG canal area have been improved and evaluated in view of their replicability

- a) The canal infrastructure in Ward 11 will have been improved if**
 - the feasibility studies to improve embankment and build a road along the canal in Ward 11 are accepted by the PCHCMC, in a reasonable time limit.
- b) Housing facilities in Ward 11 will have been improved if**
 - the Vietnamese FS and the land acquisition procedures are started in order to ensure the approval of the pre-design not later than 1 March 2002 and land attribution free from occupation is not later than 1 April 2002;
 - a relocation policy, including levels of compensation, modalities for loan attribution and management, selling price of the plots has been timely agreed upon;

- the land acquisition procedures for the "Sites and services" area and the land of the agro factory are completed at the beginning of the Project.

2.2.3. *The waste water of the DEN canal has been treated through aerated lagoon technology and evaluated in view of its replicability*

a) An aerated lagoon wastewater treatment plant for Ward Binh Hung Hoa, Binh Chanh district, has been constructed and made operational if

- The land acquisition procedures for the lagoon are completed at the beginning of the Project;
- Land acquisition can proceed without any delay;
- The Urban Drainage Company reshapes the entire section between White bridge and confluence with 19 May canal, including the moving to the north of 920 m of Den canal.

3. Project Implementation

3.1. Budgetary means

3.1.1. *Solid waste collection and dumping have been organized up to acceptable standards and evaluated in view of their replicability*

This pilot project will be entirely financed by the Belgian contribution. The total budget needed for these activities is estimated **at 530,300 EUR (7,227,989,000 VND)**. The detailed cost estimates can be found in the financial file (section 5).

3.1.2. *Canal infrastructure and housing facilities in THLG canal area have been improved and evaluated in view of their replicability*

The Belgian and Vietnamese contributions and the Counter Value Fund will finance these pilot projects. The total budget needed for the above mentioned activities is estimated **at 8,035,800 EUR (109,527,954,000 VND)**. The detailed cost estimates can be found in the financial file (section 5).

3.1.3. *The waste water of the DEN canal has been treated through aerated lagoon technology and evaluated in view of its replicability*

The Belgian and Vietnamese contributions will finance these pilot projects. The total budget needed for the above mentioned activities is estimated **at 5,787,500 EUR (78,883,625,000 VND)**. The detailed cost estimates can be found in the financial file (section 5).

3.1.4. *Socio-economic support and capacity building have been enhanced*

The disbursement under strategy "capacity building and awareness raising" amounted to 65.5% of the initial budget under the Belgian grant and 40% under the Vietnamese counterpart. Details of the budgetary lines and expenditure of the extension phase figures in the financial file. The total budget needed for the above mentioned activities is estimated **at 588,300 EUR (8,018,529,000 VND)**. The detailed cost estimates can be found in the financial file.

3.2. Human means

BTC and PCHCMC will jointly establish a “Project Management Unit”, hereinafter referred to as “PMU”. The Project Management Unit is responsible for the daily management of the project. It will comprise one general coordination unit and 4 project units, as explained here after in point 3.3.

Short-term missions, totalising 8 man-month, for the technical, financial and socio-economic surveys of the different pilot projects, training and seminars, will complete the PMU activities.

An additional short-term assistance, totalising 5 man-month will be provided to assist PMU during the survey, implementation and the first year of operation of the aerated lagoon. The terms of reference of this surveys will be made by the PMU.

3.3. Management and Implementation Modalities

3.3.1. Project Management Unit

The Project Management Unit (PMU) is responsible for the daily management of the project. It will comprise one general coordination unit and 4 project units, as explained here after. The terms of reference of the PMU staff are detailed hereafter in point 5.4.

For a better use of available competent human resources and given that the pilot projects and the Feasibility Study (FS) are small scale interventions, there will be one PMU for this Project and the "Feasibility study" project. All PMU members will be based in the same office in order to facilitate sharing data and experiences.

- PMU Coordination unit: one full time coordinator, one long term chief technical adviser (expatriate), one assistant technical adviser (expatriate), one administrative assistant, two accountants, two secretaries, one translator, one GIS expert, two drivers, one maintenance staff.
- Lagoon unit: one vice coordinator in charge of the Aerated Lagoon, one ad-hoc DoSTE adviser.
- Urban unit: one vice coordinator in charge of urban projects in Ward 11 and Ward BHH and the construction of STS, 1 architect, 1 site engineer.
- Social unit: one vice coordinator in charge of related social-economic activities and capacity building.
- FS unit: one vice-coordinator in charge of FS, a technical adviser, a full-time interpreter, and on an ad-hoc basis a Housing adviser, DoSTE adviser, CAO adviser, Sociology adviser.

The team shall be supported by local and international consultants and by social workers as described before.

The PMU will be established under PCHCMC.

The PMU will also be in charge of preparation of the scheduled Steering Committee meetings and draft the minutes of these meetings.

3.3.2. *Implementation modalities*

- The Vietnamese contribution, including the budget from the Counter Value Fund¹, will be managed according to Vietnamese regulations.
- The management of the Belgian contribution, including all bidding activities, will be managed according to Belgian regulations.
- The aerated lagoon, the solid waste management and the site and services project projects are small-scale projects belonging to category B (Lagoon, solid waste management and Site and services) of the Vietnamese regulations. The pilot project of Ward 11, including the construction of apartments and other infrastructure, belongs to category C. According to Vietnamese regulations, these pilot-projects do not need to be appraised and approved by central Ministries.
- Previous and ongoing approvals and authorisations for pilot projects will remain valid, including the delegated approval authorisation to PCHCMC (letter No 3167/VPCP-CN of 2 August 2000) and will be applied to all pilot projects. Regrouping Former small individual project activities have been regrouped under one denomination to facilitate the implementation; it shall not affect the approval procedures.
- For each pilot project, a pre-design study will be prepared, coordinated by the PMU and under the responsibility of BTC (Belgian Feasibility Study). Such study will specify the exact location of the project, the surface of the land required, the technical pre-designs, the preliminary cost-estimates and a brief assessment of the impact. The PMU will oversee the progress of the design and will provide necessary guidance. Each pre-design study will be approved by BTC. During the preparation of the pre-design, necessary information will be transmitted to PCHCMC in order to accelerate the preparation of consequent Vietnamese Feasibility Studies.
- BTC will transmit the pre-design study to PCHCMC, together with the notice on land requirement for the implementation of the pilot projects.
- PCHCMC will submit the preparation of Vietnamese Feasibility Studies to Vietnamese sub-contractors and accomplishes the procedures for appraisal and approval of these Vietnamese feasibility studies. The PCHCMC, assisted by the PMU, will instruct the relevant City Departments to establish the compensation councils, to inform the population, to calculate the exact compensation amounts, and to accomplish the procedures for land compensations, acquisitions and attributions, payment of compensations and managing the resettlement procedures.
- The sale of the apartments and plots constructed under the Project will be exempt from the investment costs of infrastructures, studies and other expenses and fees according to Vietnamese regulations on relocation. The resettlement mode and conditions will be specified in the "Relocation Policy Paper" agreed by the PCHCMC.
- Within maximum one month from the date of the submission of BTC official pre-design and notice on land requirement, the PCHCMC will inform BTC of its decision on the approval of the pre-design, including possible observations and remarks. A copy of the decision will be transmitted to the PMU and to relevant authorities.
- Within four months from the date of the submission of BTC, the official pre-design and request for land, the PCHCMC will inform BTC of approval of the land acquisition and attribution.

¹ following an agreement between Vietnam and Belgium concerning “A debt relief of the external debt of the socialist republic of Vietnam towards the Kingdom of Belgium and the financing of projects in Vietnam”, signed on 7 December 2000,

- Within maximum 12 months from the date of the submission of BTC official Pre-design and request for land, the PCHCMC will accomplish all the compensation procedures and payments, according to the compensation policy, including the evacuation of the land by the population, demolishing and evacuating the existing houses. The required land, free from occupation, will then be handed to the PMU for starting the implementation of the pilot projects.
- The selected contractor(s) will prepare the detailed design, including detailed technical designs and the technical specifications, complying with international standards, the detailed cost-estimates, the technical specifications and the tender documents for the construction works and the supply of equipment. The detailed design will be approved by BTC, assisted by the PMU as well as by short-term consultants where necessary. For works financed under the Counter Value Fund (CVF), the detailed designs will be approved by PCHCMC.
- For contracts financed exclusively under the Belgian budget, the payments to contractors will be done by BTC.
- For contracts financed exclusively under the Vietnamese budget, the payments to contractors will be done by PCHCMC. The modalities for payment of the contractors under the Counter Value Fund will be according to the content of the letter No 39/2001/TTBTC from MOF dated 5 June 2001.
- Independent external financial auditors and technical auditors will evaluate the financial, technical and social aspects of the project and provide recommendations on these aspects. The audits will be organised at the end of each twelve- month period, starting from the date of signature of the Specific Agreement. The audit reports will be presented to DGIC, BTC, MPI, MOF, PCHCMC and the Steering Committee of the project. Following the conclusions and recommendations of the audit reports, the project activities can be continued, modified or even stopped if fatal risks related to mismanagement of funds, non-respect of the project objectives, non-respect of the schedule of planning are found.

3.3.3. Implementation period

The activities are scheduled over a 39 months period starting on the 1st of October 2001. A detailed schedule of activities has been joined in point 6.2.

4. Project Monitoring and Evaluation

4.1. Monitoring Modalities

4.1.1. *Steering Committee*

A joint local consultative body will be set up under the name of “Steering Committee”.

The Steering Committee will be composed of one representative of each of the following administrations/services:

- the People's Committee of HCMC (PCHCMC)
- the Ministry of Planning and Investment (MPI)
- the Ministry of Finance (MOF)
- the Directorate General of International Cooperation of the Belgian Ministry of Foreign Affairs (DGIC)
- the Belgian Technical Cooperation (BTC)
- the Department of Planning and Investment of HCMC
- the Department of Communications and Public Works of HCMC
- the Department of Science, Technology and Environment of HCMC
- the Department of Cadastre, Land and Housing of HCMC
- the Chief Architect's Office of HCMC
- the Districts 6, 8, Tan Binh and Binh Chanh of HCMC

The Steering Committee will assume the following responsibilities and will be mandated to:

- provide guidance and orientation to the project implementation;
- appraise the state of progress of the project and the achievement of its general objective;
- approve the intermediate and final reports;
- analyse the management of the resources (human, financial or material);
- approve changes in the schedule of activities of the project;
- decide on modifications of Intermediate Results and Activities proposed by the PMU provided that such modifications do not alter the project's general and specific objectives nor its overall budget;
- propose to both Governments modifications of Intermediate Results and Activities proposed by the PMU in case such modifications do alter the project's general and specific objectives and/or its overall budget;
- appraise the financial audits;
- change the duration of implementation of the project, provided that such changes do not alter the project's general and specific objectives nor its overall budget;

The Steering Committee shall lay down its own rules and regulations, which comply with the provisions of the Specific Agreement, and take its decisions by consensus.

The Steering Committee members are the same as those for the other Belgian Vietnamese Tan Hoa Lo-Gom project (Feasibility Study). The programme of the Steering Committee meeting therefore can cover one, or both Tan Hoa-Lo Gom projects.

The Steering Committee shall meet at least once a year or on demand of one of its members.

4.1.2. *External Evaluation Missions*

Besides the monitoring provided by the Project Steering Committee, the project also foresees surveys and annual external evaluation missions during the project's lifetime.

The independent external financial auditors and technical auditors will evaluate the financial, technical and social aspects of the project and provide recommendations on these aspects. The audits will be organized at the end of each twelve- month period, starting from the date of signature of the Specific Agreement.

The PMU is responsible for drafting the ToR of the surveys, external audits and evaluations, taking into account the Project performance indicators and means of verification, explained in the logical framework (see point 6.1). The ToR will have to be approved by the Steering Committee.

The financial auditors will be chosen through competitive bidding on the basis of short listed audit firms. The social survey specialists and technical evaluator(s) will be selected through competitive bidding on the basis of shortlisted firms/consultants with proven experience in the evaluation of complex projects related to infrastructure construction and urban-planning and social issues. The tenders will be organised by BTC, assisted by the PMU. The award of the contracts will be jointly decided by BTC and the PCHCMC.

The audit reports will be presented to DGIC, BTC, MPI, MOF, PCHCMC and the Steering Committee of the project.

Following the conclusions and recommendations of the audit reports, the project activities could be continued, modified or even stopped if fatal risks related to mismanagement of funds, non-respect of the project objectives, non-respect of the schedule of planning are found.

4.1.3. Mid-term review

A mid-term review mission will be organized on demand of the Steering Committee, who shall review achievements, progresses and constraints, and make recommendations.

4.2. Means of Verification

The Indicators of performance and the means of verification are described in the logical framework in annex. These will be updated and adapted by the technical expert and approved during the first Steering Committee.

5. Financial file

The overall budget has been defined as follows:

Source	Total budget	balance of first phase	new contribution
Belgium	6,090,717 EUR	2,839,381 EUR	3,251,336 EUR
Ho Chi Minh City	8,030,876 EUR	880,388 EUR	7,150,488 EUR
Counter Value Fund	3,253,192 EUR		3,253,192 EUR
TOTAL	17,374,785 EUR	3,719,769 EUR	13,655,016 EUR

A detailed budget will be presented in the following pages.

6. Annexes

6.1. Logical Framework

6.2. Schedule of activities

6.3. ToR of the PMU staff

6.3.1. PMU Coordination

- **PMU coordinator :** (39 man months) The full time working Vietnamese coordinator will be a senior architect - urban planner, or a senior architect - engineer or a senior engineer with a post-graduate in ecology, environmental science, hydraulics, economics or urban-planning. At least ten years experience in designing and implementing development projects in the field of construction/urban-planning and/or infrastructure, water supply and wastewater treatment. At least two years of experience in multidisciplinary project management and excellent managerial skill with ability to plan, delegate and negotiate. He/she has at least five years experience with international cooperation agencies and has the ability to interact positively with governments and international organisations. He/she has excellent communication skills (written, oral and interpersonal), masters English (both written and spoken) and has good computing skills.

In close collaboration with the PMU Chief technical adviser, the PMU coordinator will be in charge of planning, budgeting, managing and coordinating all the activities of the PMU and the PMU units. Specifically, he/she will liaise with PCHCMC, City departments, MPI and MOF to assure that replenishment of project accounts, transmission and approval procedures of studies, ToR and tenders take place according to the Project Planning. He/she informs the Chief Technical adviser on state of approvals and decisions taken by the Government and PCHCMC, assists PCHCMC and the PMU with preparation and evaluation of tenders, prepares progress reports and agendas for the Steering Committees, participates in presentation of the project activities to SC and to ODAP; organises and assists in all meetings with SC, BTC, DGIC, PCHCMC, City departments, Districts and wards. For PCHCMC, he/she is ultimately responsible for the successful monitoring and implementation of the project activities.

- **Chief technical adviser:** (39 man months) The international expert will be a senior architect-urban planner or a senior architect-engineer with preferably a post-graduate in ecology, environmental science, hydraulics, economics or urban planning. He/she has at least ten years experience in designing and implementing projects in the field of construction/urban-planning and/or infrastructure, water supply and wastewater treatment. At least some of this experience has been acquired in Asia. He/she has at least five years of experience in multidisciplinary project management and excellent managerial skill with ability to plan, delegate and negotiate. He/she has at least five years experience with international cooperation agencies and has the ability to interact positively with governments and international organisations. He/she has excellent communication skills (written, oral and interpersonal), masters English (both written and spoken) and has good computing skills.

As Chief Technical Adviser, he/she will closely collaborate with the Vietnamese Project Management Unit (PMU) coordinator. He/she will be in charge of planning, managing and coordinating all the activities of the extension of the project "Tan Hoa Lo Gom canal sanitation & urban upgrading". He/she will be in charge of the preparation and evaluation of tenders, the preparation of ToR for technical assistance and coordination of short-term technical assistance. He/she and the Vietnamese PMU coordinator will prepare progress reports and the final project report following the format of BTC and present activities to SC and to ODAP (Official Development Assistance Partnership for Ho Chi Minh City). He/she will organise all Steering Committee meetings and participates in meetings with City departments, Districts and

Wards of Ho Chi Minh City. For BTC, he/she will ultimately be responsible for the monitoring and implementation of the project activities.

The Chief Technical Adviser is mandated to act on behalf of BTC for all negotiations with PCHCMC.

- **Assistant Technical Adviser** : (30 man months) This international expert will be an engineer. He/she has at least five years experience in designing and implementing projects in the field of construction/urban-planning and/or infrastructure, water supply and wastewater treatment. He/she has at least five years experience with international cooperation agencies and has the ability to interact positively with governments and international organisations. He/she has excellent communication skills (written, oral and interpersonal), masters English (both written and spoken) and has good computing skills.

The Assistant Technical Adviser will assist the Vietnamese PMU coordinator and the Chief Technical Adviser in establishing ToR and in conducting and evaluating tenders. He/she will assist in preparing and following-up of service, supply and works contracts. He/she will assist in preparing the annual budgets.

- **Administrative assistant**: (39 man months) One full time Vietnamese expert with experience with technical and legal terms related to the project; good knowledge of the city departments and regulations, good computer skills; perfect fluency in direct oral as well as written English. The administrative assistant is perfectly conversant with the THLG project. The administrative assistant will directly assist the coordinator and chief technical adviser.
- **GIS expert**: (39 man months) Vietnamese expert with good knowledge of Map Info and conversant with the current GIS/MapInfo of the THLG project. He/she will assist the PMU to update and complete the GIS according to the needs of the project, specifically to integrate the results of different surveys on Ward 3,4,7,8, 11 and Ward BHH; to assist with the definition of the solid waste collectors route in the new wards. The consultancy firm for the FS will have their own GIS specialist. At the start of FS , the PMU GIS expert will transmit to the consultancy firm, the required aerial pictures, digital maps, thematic maps and data on land-use, flood-prone areas, etc. He will also assist the PMU urban unit with preparing drawings on CAD (computer assisted design) programmes. Training on CAD and/or GIS will be provided by the project.
- **Accountants**: (55 man months) Two qualified Vietnamese accountants with at least five-year experience in accountancy, experience in working with international agencies, full computer skills, fluent English, proven assiduity and competence (letter of recommendation needed). A new part time accountant, fluent in English, will be recruited also to assist the accountant with preparation of accounting reports, budget projections, bank reconciliation statements, and other accounting responsibilities. The accountants will meet the Ministry of Finance (MOF) in Hanoi on a half-year basis to provide detailed information concerning the Counter Value Fund (CVF) expenses.
- **Translator**: (39 man months) One full-time English-Vietnamese translator excelling in direct oral as well as written translations into and from English. He/she has experience with technical and legal terms related to the project; has good knowledge of the city departments and regulations and has good computer skills. He/she is conversant with the THLG project. He/she will assist the PMU, international consultants and BTC with all written and oral translations, organisation of meetings, collection of information and data.
- **Secretary**: (78 man months) Two full-time secretaries to assist the PMU in secretarial works, organisation of meetings, workshops, travels, classification of the correspondence/mails, organising and keeping a documentation centre with all the project reports and documents according to the classification advised by the PMU

coordinator/chief technical adviser, logistic support to all PMU activities, good knowledge of the city departments; master English and have good computer skills.

6.3.2. *Urban Unit*

- **Urban Unit vice-coordinator** : (39 man months) One full time Vietnamese senior architect - urban planner. At least ten years experience in designing and implementing construction/urban-planning and/or infrastructure, projects. At least two years of experience in multidisciplinary project management and excellent technical, managerial and planning skills. At least two years experience with international or bilateral donor agencies. Excellent communication skills -written, oral and interpersonal, perfect written and spoken English. Good knowledge of city departments and urban/construction regulations, knowledge and experience in procedures of land acquisition and compensation will be an asset. The urban unit vice-coordinator will manage all activities related to the pilot project of site &services (Ward Binh Hung Hoa), pilot project of apartments, infrastructure and embankment in Ward 11, and the construction of STS. He/she will have delegated responsibility from the PMU coordinator to coordinate the activities with different city departments/districts/wards/ consultancy offices, report to the coordinator if higher level of negotiations should be established. He/she will coordinate the intervention of multiple contractors in order to assure progress of the activities according to the Project Planning. He/she will evaluate the preliminary cost estimates of the construction/infrastructure works, will evaluate the technical designs, specifications and costing aspects of the tenders, will advise the PMU coordinator/chief technical adviser on the technical acceptability of the tender documents. In close collaboration with the Social Unit vice-coordinator, he/she will coordinate activities related to land compensation/acquisition with the activities related to Ward 11 and Ward BHH.
- **Senior architect** : (39 man months) One full time Vietnamese senior architect or architect/engineer with ten-year experience in designing and implementing construction/infrastructure, projects and experience in CAD (computer assisted design software). Perfect written and spoken English. Good knowledge of city departments and urban/construction regulations. The senior architect will assist the Urban-unit vice coordinator in all activities related to the pilot project of site &services (Ward Binh Hung Hoa), pilot project of apartments, infrastructure and embankment in Ward 11, and the construction of STS. Specifically, he/she will assist the vice-coordinator to prepare the preliminary cost estimates of the construction/infrastructure works, to review the technical designs, specifications and costing aspects during the tender and during the whole implementation of the project. Together with the site engineer, he/she will attend the construction sites at least once a week, evaluate the progress and quality of construction works, prepare a site report for the urban unit vice-coordinator with copy to the PMU director and the PMU Chief technical adviser. He/she will assist the PMU with preparation of drawings on CAD.
- **Senior Engineer** : (39 man months) One full time Vietnamese senior engineer with ten years experience in designing and implementing construction/infrastructure, projects. Perfect written and spoken English. Good knowledge of city departments and urban/construction regulations, The senior engineer will assist the Urban-unit vice coordinator in engineering activities related to the pilot project of site &services (Ward Binh Hung Hoa), pilot project of apartments, infrastructure and embankment in Ward 11, and the construction of STS. Specifically, he/she will assist the vice-coordinator to prepare the preliminary cost estimates of the construction/infrastructure works, to review the technical designs, specifications and costing. Together with the architect, he/she will attend the construction sites at least once a week, evaluate the progress and quality of construction and infrastructure works, prepare a site report for the urban unit vice-coordinator with copy to the PMU director and the PMU Chief technical adviser.

He/she will also work with the Lagoon Unit and assist with review of the technical designs, review of costs estimates, site supervision and quality control.

6.3.3. *Lagoon Unit*

- **Vice-coordinator:** (39 man months) One full time senior drainage or hydraulics engineer with 10 years experience in the implementation of drainage and wastewater treatment projects. A post-graduate in ecology or environmental science or urban planning is an advantage. He/she has good written and spoken English; computer skills. The lagoon unit vice-coordinator will manage all activities related to the pilot project of Aerated lagoon (Ward Binh Hung Hoa). He/she will have delegated responsibility from the PMU director to coordinate the activities with different city departments/districts/wards/ consultancy offices, report to the coordinator if higher level of negotiations should be established. He/she will coordinate the intervention of multiple contractors in order to assure progress of the activities according to the Project Schedule. He/she will evaluate the technical designs, specifications and costing aspects of the consultancy firm, will advise the PMU coordinator/chief technical adviser on the technical acceptability of the tender and implementation documents. In close collaboration with the Social Unit adviser, he/she will coordinate activities related to land compensation/acquisition with the activities related to Ward BHH.

Environmental Adviser: from the DoSTE Department, participating in the PMU activities for the equivalent of 1 day a week; he/she will advise the PMU and the international consultants on legal matters and procedures. The adviser, appointed by the PCHCMC, will liaise between the PMU & DoSTE providing the PMU with all information requested by the Lagoon Unit vice-coordinator. The adviser will be fluent in English with good computer skills; min. 10 year experience.

6.3.4. *Social Unit*

- **Vice-coordinator:** (39 man months) One full time senior urban planner or sociologist; with 5 years experience in the implementation of housing and relocation projects, social activities with the participation of population and wards. Good written and spoken English; computer skills. The social unit vice-coordinator will manage all social and economic and capacity building activities related to solid waste management, land acquisition, land compensation, relocation and resettlement in Wards 3,4,7,8, 11 and BHH. He/she will have delegated responsibility from the PMU director to coordinate the activities with different city departments/districts/wards/ consultancy offices, report to the coordinator if higher level of negotiations should be established. He/she will coordinate the activities of the social workers. He/she will evaluate the policy of compensation, micro-credit attribution, housing loan attribution prepared by the compensation councils and by consultancy firms, will advise the PMU coordinator/chief technical adviser on the social acceptability and economic sustainability of the policies. He/she will work in close collaboration with the urban unit vice-coordinator.

6.4. International and Local Technical Assistance

By way of competitive tendering, international consultancy firms or consortium (hereinafter called the 'international consultant') will be assigned to carry-out the following:

- 1) Detailed design of the Aerated lagoon
- 2) Technical assistance to the PMU for the supervision of engineering works of the lagoon

In addition to these consultancy firms, the PMU staff will be supported by local and international consultants and social workers as described in the Technical and Financial File. Their duties include on-the-job training and capacity building in the PMU and in the institutions, districts, wards where the Project is active

Teams of international or local consultants shall be selected according to their experience in project implementation, on which this extension phase will be focused. These teams will act as assistants to the pilot project's management.

1. **Solid waste management:** TA for evaluating the construction and equipment of the STS at critical phases. Preparation of a maintenance manual for STS and training the STS operators in operational management and regular maintenance of the STS.
2. **Urban projects (Site and services and Ward 11):** TA for design and follow-up of the resettlement policy. TA for design and follow-up of the Housing construction support loan; lawyer for legal advice in these areas. Technical adviser to the PMU for the follow-up of the implementation, quality control, management of the site & services and the Ward 11 operations, capacity building. TA for socio-economic survey and evaluation of the Solid-waste, site and services and Ward 11 operations
3. **Waste Water Treatment Plant: Aerated Lagoon.** assistance to tendering and selection of the Consultancy firms for 1) the Detailed Design of the Aerated Lagoon, 2) Technical assistance to the PMU.

The PMU is responsible for designing the ToR of the technical assistance, coordinating their inputs and organising their missions. The TA will be chosen through competitive bidding on the basis of short listed firms or individual consultants with sound proven experience in implementation of similar works. The tenders will be organised by the PMU. The award of the contracts will be approved by BTC.