

IMPLEMENTATION OF THE WATER ENVIRONMENT IMPROVEMENT PROJECT, TAU HU – BEN NGHE – ĐOI – TE CANAL BASIN.

❖ EFFICIENCY OF THE PROJECT , PHASE 1

❖ LESSONS LEARNT AND SOLUTIONS RECOMMENDED

Presented by: Trần Hữu Quốc Vi (Mr.)

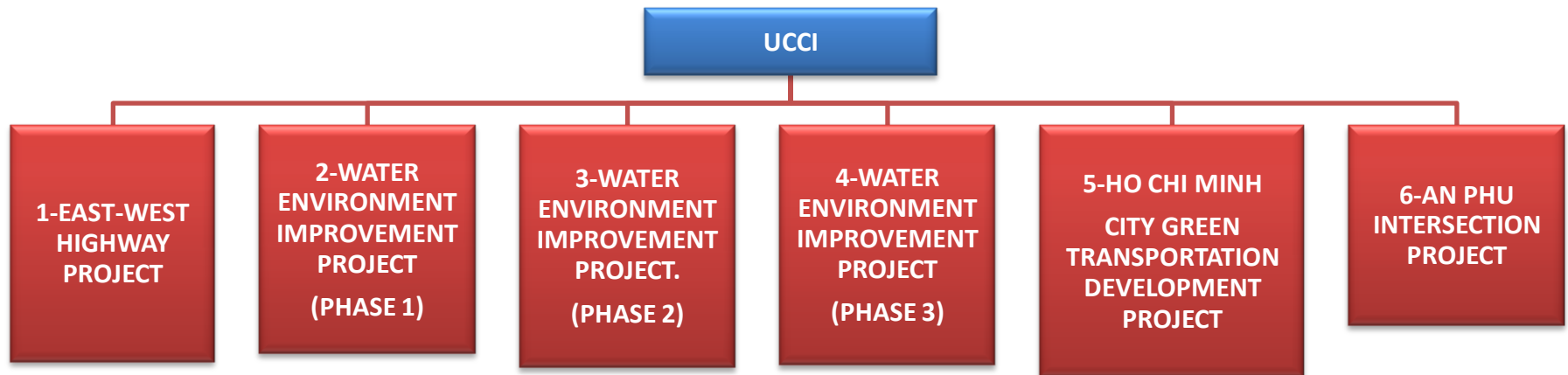
- Deputy Director
- Water Environment Improvement Project 1 Division.
- Urban – Civil Works Construction Investment Management Authority of Ho Chi Minh City (UCCI)

Yangon, Myanmar, December 11, 2017.

OVERVIEW OF UCCI

➤ International name: URBAN-CIVIL WORKS CONSTRUCTION INVESTMENT MANAGEMENT AUTHORITY OF HO CHI MINH CITY.

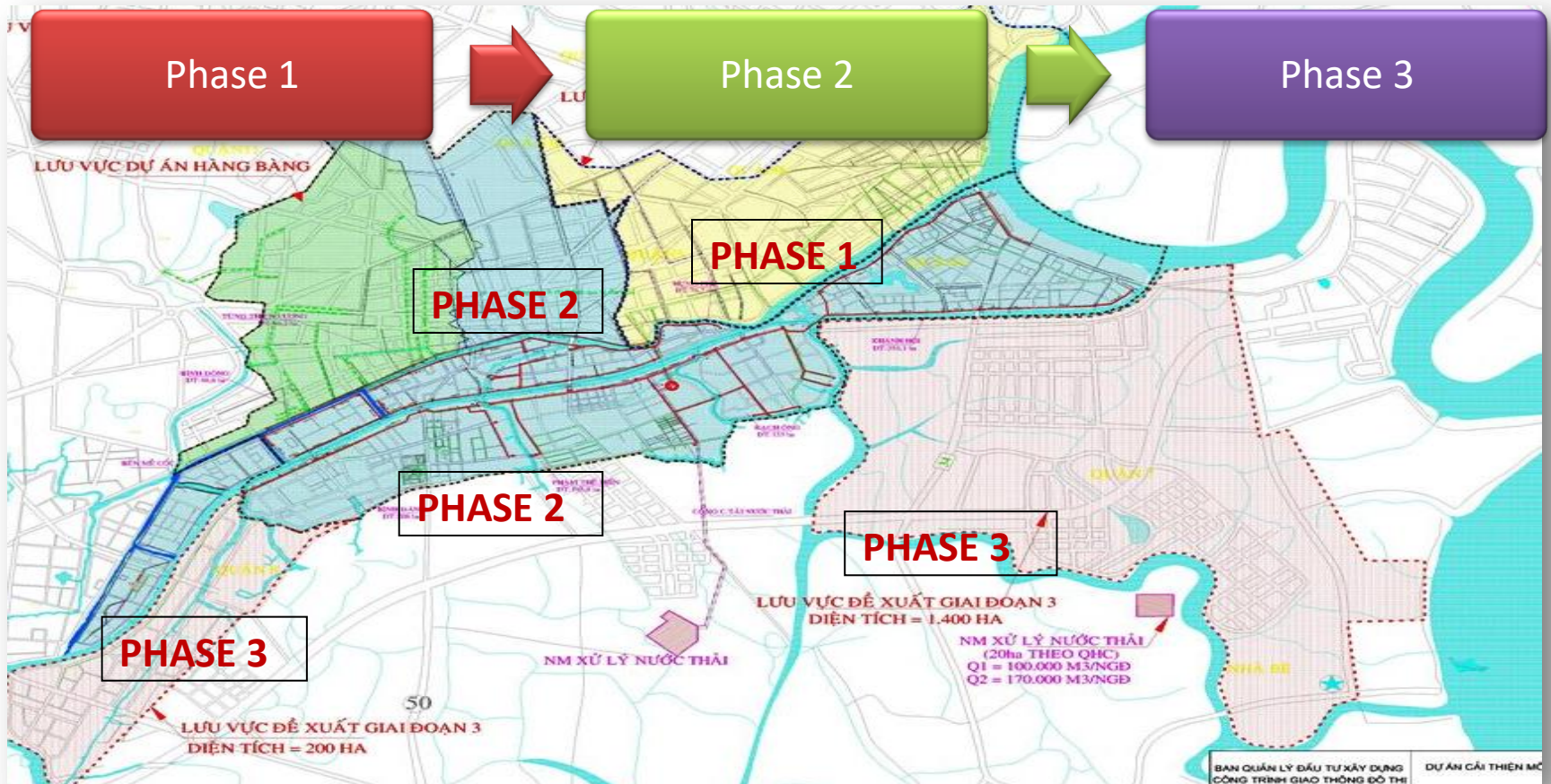
➤ Abbreviation: UCCI



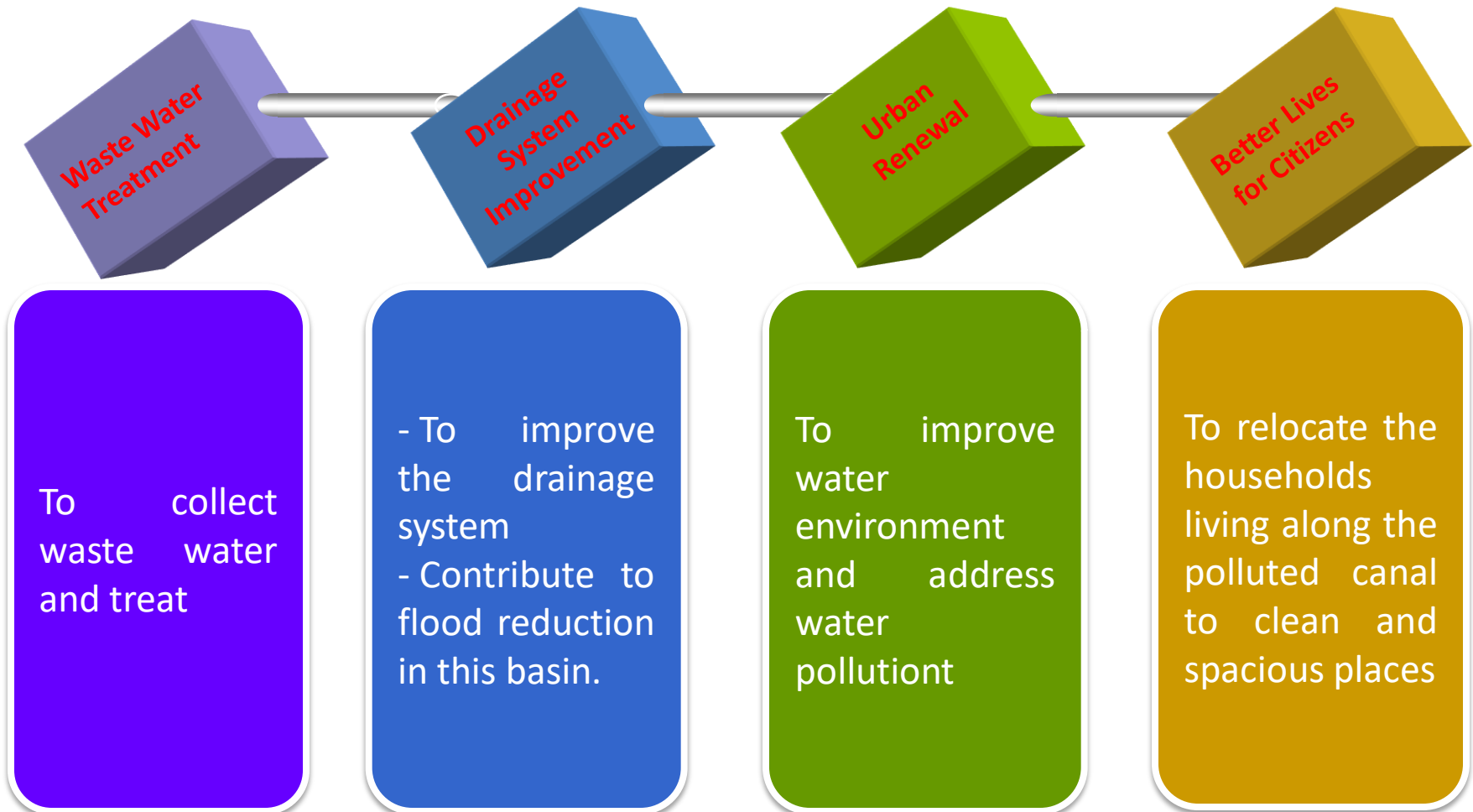
UCCI has been established from 2000 and directly under authority of Ho Chi Minh City's People Committee of Viet Nam.



- **Project name:** The HCMC Water Environment Improvement project
Tau Hu – Ben Nghe– Doi - Te canal basin.
- **Project area:** The Tau Hu–Ben Nghe–Doi-Te canal basin extends over an the area of 3,130 ha including 11 districts: 1, 3, 4, 5, 6, 8, 10, 11, Tan Binh, Binh Thanh and Binh Chanh.
- **Funding Source:** Japanese ODA loans, HCM's Counterpart fund



PROJECT GOALS



EFFICIENCY OF THE PROJECT , PHASE 1

After phase 1 completed in 2012, several improvement points were made as follows:

- **the improvement in drainage capacity and reduction in flood damage in the area for this urban drainage project were recognized: No inundation in the project area was reported after the project completion. Before the project, inundation used to happen every year.**

Effects of the urban drainage portion of the Project

	Base-line	Target	Actual (after the completion (2012))		
	Year 2000	Year 2010	Year 2014	Year 2015	Year 2016
Rain fall (mm/6hours)	113.47mm/6hr(5-year probability rainfall)		105.1	106.1	204.3
Effects of the improvement of urban drainage in Tau Hu Area					
Flooded area (ha)	15.4	2.3	0	0	0
Flood depth (cm)	30-60	15 or below	0	0	0
Effects of the improvement of urban drainage in Ben Nghe Area					
Flooded area (ha)	32.6	4.9	0	0	0
Flood depth (cm)	30-60	15 or below	0	0	0
Effects of the improvement of the existing combined sewers					
Flood depth (cm)	20-50	0	0	0	0

Source: JICA, UCCI

EFFICIENCY OF THE PROJECT , PHASE 1

- **Actual wastewater inflow is 90% of the WWTP capacity. Actual effluent water quality is BOD -16 mg/L (project target: BOD 50 mg/L)**

Operational indicators of the wastewater treatment plant built under the Project Source: JICA

	Target	Actual		
		Year 2014	Year 2015	Year 2016
Wastewater volume (m ³ /day)	140,000	128,370	135,651	118,900
Capacity utilization (%)	-	91	96	84
Water quality (BOD)				
Inflow	167mg/L	156mg/L	151mg/L	123mg/L
Discharge	50 mg/L or below	16mg/L	12mg/L	8mg/L

- **The improvement of the water quality in the canal waterways was more than expected. The water quality of the worst polluted canal was improved from BOD 89 mg/L in 2000 to BOD 24 mg/L (high water time), BOD 30 mg/L (low water time) in 2016 (project target: BOD 40 mg/L)**

Effects of the Project on the improvement of the water quality of the canals Source: JICA

Canals	Base-line	Target	Actual (after the completion (2012))	
	Year 2000	Year 2010	Year 2016	
	(mg/L-BOD75%)		Measuring Point	(mg/L)
Tau Hu	89	40	C07	(L)30、(H)24
			C09	(L)24、(H)18
Ben Nghe	42	16	C13	(L)15、(H)14
			C14	(L)12、(H)11
Doi	71	43	C10	(L)21、(H)16
Te	22	10	-	-

EFFICIENCY OF THE PROJECT , PHASE 1

- **2,573 households including 2,000 households in the slums beside the canals were successfully relocated in accordance with the Resettlement Action Plan (RAP) prepared by the Government. Among them, 1,737 households received compensation payments and moved to other locations by themselves. 800 households moved to the apartments prepared by the municipal government. These were provided with a low interest housing loan with 10 years maturity to purchase the room in their apartment. All the procedures were in accordance with the decree for resettlement issued by the central and municipal governments.**
- **The landscape beside the canal waterways was drastically improved. The river banks which were occupied by slums were transformed to highways, promenades and municipal parks.**

CANAL WATERWAY BEFORE AND AFTER PROJECT , PHASE 1



Photo credits: Oriental Consultants Co., Ltd.

DIFFICULTIES AND OBSTACLES

- I **Narrow construction space; tidal influences and unforeseen obstacles, such as existing utilities**
- II **Compensation and resettlement sometimes are not legally harmonized .**
- III **Lack of relevant database and information on aboveground and underground infrastructures in the design stage**



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DIFFICULTIES AND OBSTACLES

- IV Inadequacies and difficulties in the appraisal of engineering design and construction cost estimates
- V Some technical problems arising during the construction that required more time to resolve
- VI Inadequate experience and solutions etc. of the Project team (the Employer, the Engineer, and the Contractor)



LESSONS LEARNT AND SOLUTIONS RECOMMENDED

1 Ensure the quality of the pre-feasibility and feasibility studies

2 Shorten the time required for project preparation procedures

3 Ensure the progress of compensation and resettlement

4 Ensure the progress of infrastructure relocation

LESSONS LEARNT AND SOLUTIONS RECOMMENDED

5

Timely prevent and thoroughly resolve contract disputes

6

Shorten the time required for designs and cost estimates appraisal and approval

7

Ensure the Employer's capacity for project implementation

8

Consistent and close coordination between relevant agencies.

LESSONS LEARNT AND SOLUTIONS RECOMMENDED

1. Ensure the quality of the pre-feasibility and feasibility studies

- Strengthen the Employer capacity
- Enhance inspection and supervision
- Enhance verification and counter-argument
- Strengthen publicity and transparency in consultant selection.

2. Shorten the period required for project preparation procedures:

- Enhance the pro-activeness of the Employer
- Improve the quality of the reports and explanations
- Improve the effectiveness in work coordination
- Provide special mechanisms to special and important projects.

LESSONS LEARNT AND SOLUTIONS RECOMMENDED

3. Ensure the progress of compensation and resettlement:

- Find legally harmonized solutions
- Enhance publicity and transparency
- Timely address inadequacies, obstacles and the residents' claims
- Shorten work coordination time and decision making time process.

4. Ensure the progress of infrastructure relocation

- Study the as-built documents of utilities
- Site investigation with new technology
- Coordination with the utilities owners in design for relocation work

LESSONS LEARNT AND SOLUTIONS RECOMMENDED

5. Timely prevent and thoroughly resolve contract disputes:

- Strengthen the capacity of the Employer,
- Employ legal advisor to support the Employer
- Take measures to prevent arising contract disputes right of contract implementation

6. Shorten the time required for designs and cost estimates appraisal and approval:

- Strongly authorize the local government to carry out appraisal
- Strongly authorize for The Project Management Unit to approve contract time extensions, price adjustments and additionally arising quantities in construction contracts under ODA funded project

LESSONS LEARNT AND SOLUTIONS RECOMMENDED

7. Ensure the Employer's capacity for project implementation:

- Deploy the professional PMU model as per the instructions given by the Ministry of Construction and the Ministry of Planning and Investment
- Professionalize project management
- Maintain training activities, strengthen capacity, and provide additional special policy regimes to the project management teams.

8. Consistent and close coordination between relevant agencies

- Close coordination between leaders and donors, and between the Employer, the Engineer, the Contractor, relevant Departments and Districts during project implementation

PHOTO OF PROJECT



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THANK YOU!

We, UCCI, would like to give our great thanks to

- JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
- JAPAN SANITATION CONSORTIUM (JSC)
- ALL OF YOU FOR ATTENDING

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