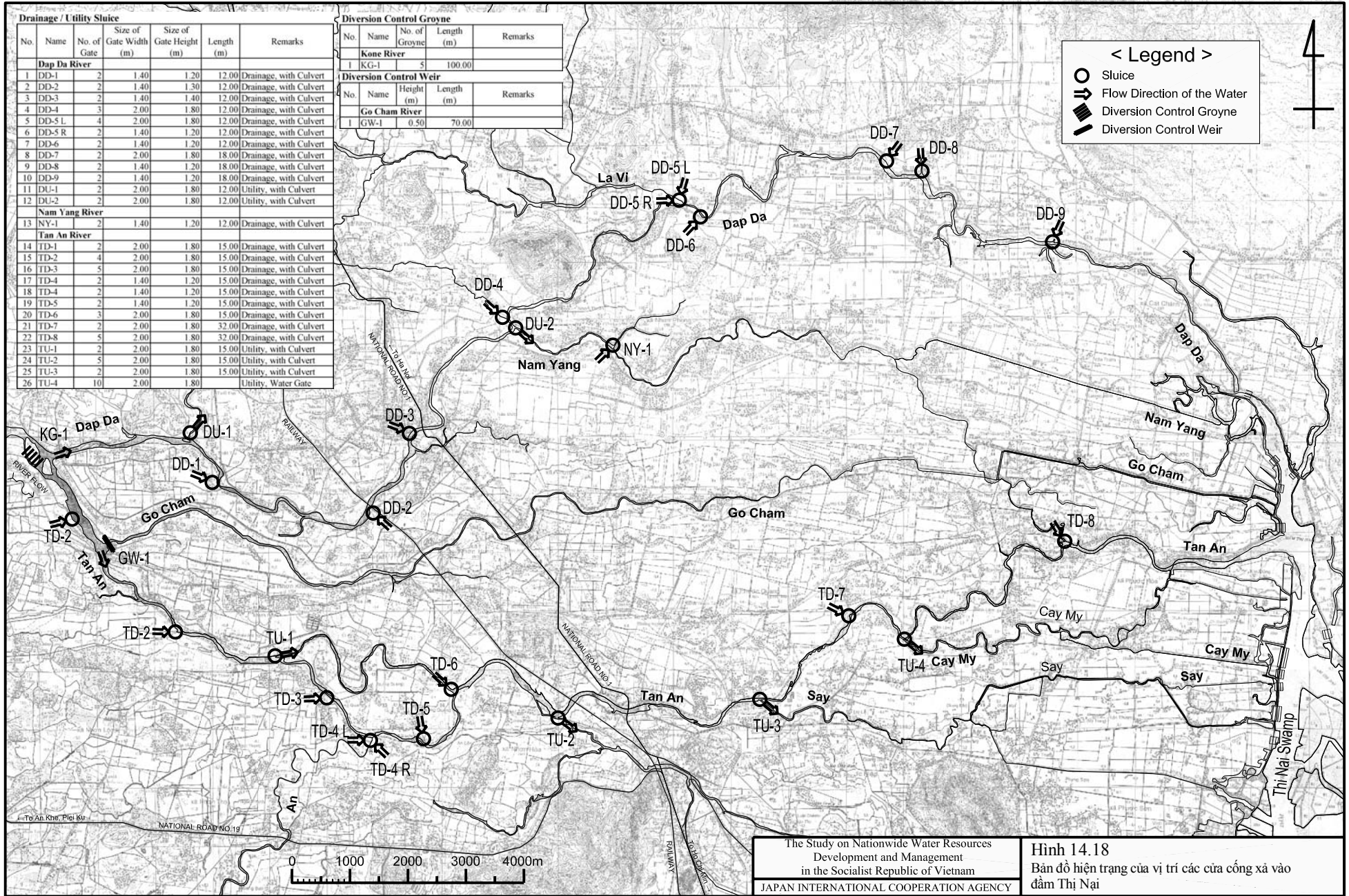


Hình 14.17 Mặt cắt dọc thiết kế của sông Tân An với đập tràn bên



Drainage / Utility Sluice						
No.	Name	No. of Gate	Size of Gate Width (m)	Size of Gate Height (m)	Length (m)	Remarks
<b>Dap Da River</b>						
1	DD-1	2	1.40	1.20	12.00	Drainage, with Culvert
2	DD-2	2	1.40	1.30	12.00	Drainage, with Culvert
3	DD-3	2	1.40	1.40	12.00	Drainage, with Culvert
4	DD-4	3	2.00	1.80	12.00	Drainage, with Culvert
5	DD-5 L	4	2.00	1.80	12.00	Drainage, with Culvert
6	DD-5 R	2	1.40	1.20	12.00	Drainage, with Culvert
7	DD-6	2	1.40	1.20	12.00	Drainage, with Culvert
8	DD-7	2	2.00	1.80	18.00	Drainage, with Culvert
9	DD-8	2	1.40	1.20	18.00	Drainage, with Culvert
10	DD-9	2	1.40	1.20	18.00	Drainage, with Culvert
11	DU-1	2	2.00	1.80	12.00	Utility, with Culvert
12	DU-2	2	2.00	1.80	12.00	Utility, with Culvert
<b>Nam Yang River</b>						
13	NY-1	2	1.40	1.20	12.00	Drainage, with Culvert
<b>Tan An River</b>						
14	TD-1	2	2.00	1.80	15.00	Drainage, with Culvert
15	TD-2	4	2.00	1.80	15.00	Drainage, with Culvert
16	TD-3	5	2.00	1.80	15.00	Drainage, with Culvert
17	TD-4	2	1.40	1.20	15.00	Drainage, with Culvert
18	TD-4	2	1.40	1.20	15.00	Drainage, with Culvert
19	TD-5	2	1.40	1.20	15.00	Drainage, with Culvert
20	TD-6	3	2.00	1.80	15.00	Drainage, with Culvert
21	TD-7	2	2.00	1.80	32.00	Drainage, with Culvert
22	TD-8	5	2.00	1.80	32.00	Drainage, with Culvert
23	TU-1	2	2.00	1.80	15.00	Utility, with Culvert
24	TU-2	5	2.00	1.80	15.00	Utility, with Culvert
25	TU-3	2	2.00	1.80	15.00	Utility, with Culvert
26	TU-4	10	2.00	1.80		Utility, Water Gate

Diversion Control Groyne				
No.	Name	No. of Groyne	Length (m)	Remarks
<b>Kone River</b>				
1	KG-1	5	100.00	
<b>Diversion Control Weir</b>				
No.	Name	Height (m)	Length (m)	Remarks
<b>Go Cham River</b>				
1	GW-1	0.50	70.00	

**< Legend >**

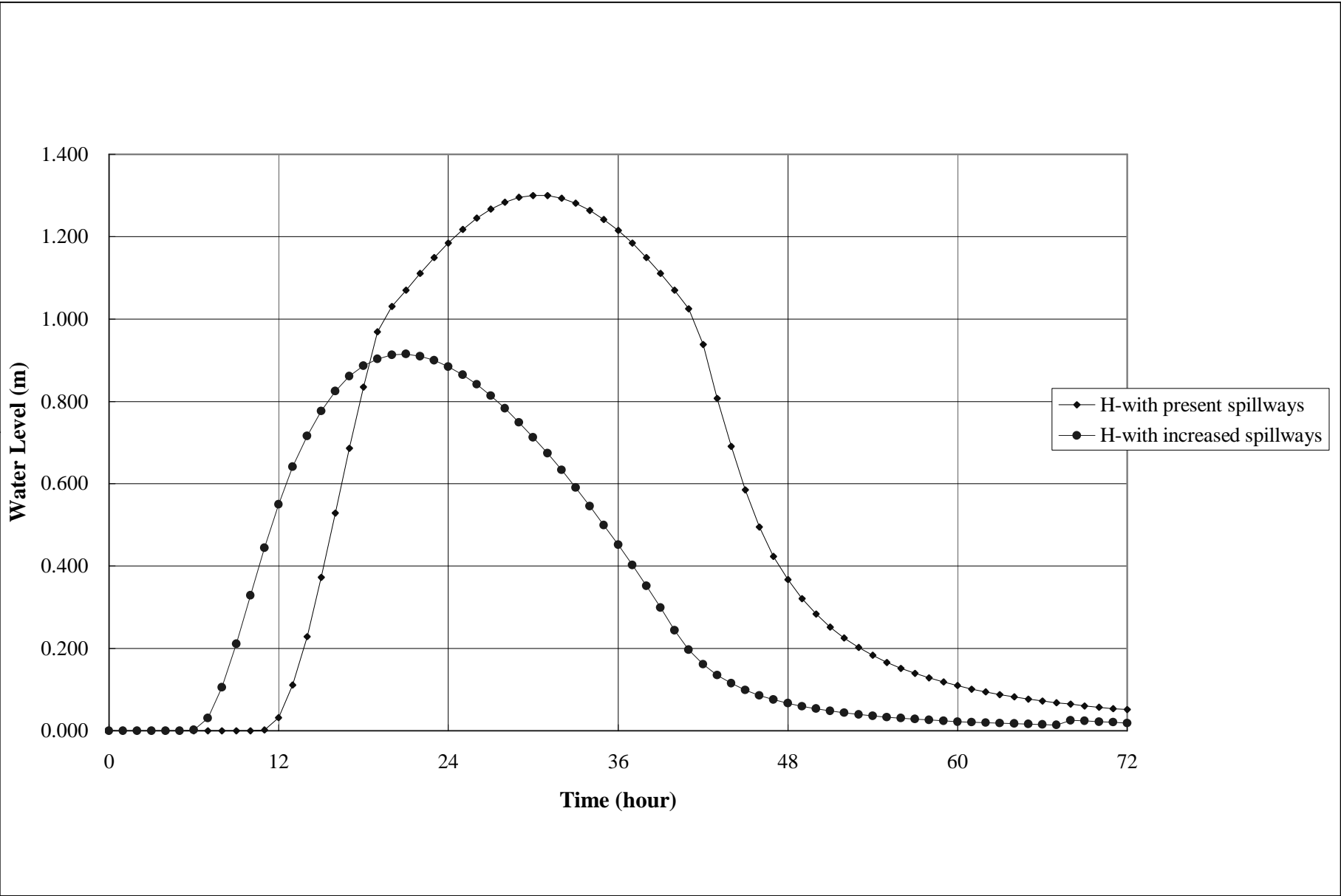
- Sluice
- Flow Direction of the Water
- Diversion Control Groyne
- Diversion Control Weir



The Study on Nationwide Water Resources  
 Development and Management  
 in the Socialist Republic of Vietnam  
 JAPAN INTERNATIONAL COOPERATION AGENCY

**Hình 14.18**  
 Bản đồ hiện trạng của vị trí các cửa cống xả vào đầm Thị Nại





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**Hình 14.19**  
 Mức nước lũ tại đồng bằng sông Kone trong lũ chính vụ 10%

### Hinh 14.20 Tiến độ xây dựng cho qui hoạch phòng chống lũ tại hạ du

Description	Quantity	2011				2012				2013				2014				2015				2016				2017											
		A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M
1. Mobilization	L.S																																				
2. Preparatory Works	L.S																																				
3. Thi Nai Swamp																																					
3.1 Sea Dyke																																					
(1) Embankment	282,000 m <sup>3</sup>																																				
(2) Wet masonry	50,500 m <sup>3</sup>																																				
3.2 Improvement of Sluice Gates	69 nos																																				
3.3 Improvement of Spillway	1,475 m																																				
3.4 New Construction of Spillway	1,230 m																																				
4. Dap Da River																																					
4.1 Dyke																																					
(1) Excavation	1,265,000 m <sup>3</sup>																																				
(2) Embankment	1,104,000 m <sup>3</sup>																																				
4.2 Bridge	4 nos																																				
4.3 Side Overflow Soilway	2 nos																																				
4.4 New construction of sluice gates	12 nos																																				
4.5 Bank Protection Works	L.S																																				
4.6 Reconstruction of Irrigation Weir	2nos																																				
5. Go Cham River																																					
5.1 Dyke																																					
(1) Excavation	329,000 m <sup>3</sup>																																				
(2) Embankment	126,000 m <sup>3</sup>																																				
5.2 Bridge	4 nos																																				
5.3 Side Overflow Soilway	2 nos																																				
5.4 New Construction of Fixed Weir	1 no																																				
5.5 Reconstruction of Irrigation Weir	1 no																																				
5.6 Bank Protection Works	L.S																																				
6. Tan An River																																					
6.1 Dyke																																					
(1) Excavation	2,641,000 m <sup>3</sup>																																				
(2) Embankment	1,013,000 m <sup>3</sup>																																				
6.2 Bridge	3 nos																																				
6.3 Side Overflow Soilway	3 nos																																				
6.4 New construction of sluice gates	13 nos																																				
6.5 Improvement of Irrigation Weir	1 no																																				
6.6 Bank Protection Works	L.S																																				
7. Nam Yang River																																					
7.1 Dyke																																					
(1) Excavation	71,700 m <sup>3</sup>																																				
(2) Embankment	229,000 m <sup>3</sup>																																				
7.2 Bridge	2 nos																																				
7.3 New Construction of Sluice Gate	1 no																																				
7.4 Bank Protection Works	L.S																																				
8. Ca My River																																					
8.1 Dyke																																					
(1) Excavation	33,400 m <sup>3</sup>																																				
(2) Embankment	20,500 m <sup>3</sup>																																				
8.2 Bank Protection Works	L.S																																				
9. Kone River																																					
9.1 Groyne	6,550 m <sup>3</sup>																																				

Hình 16.1 Kế hoạch thực hiện chung theo khu vực  
Kone River Basin

Description	Year																		
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
1. Study on Nationwide Water Resources																			
Kone River Basin Master Plan																			
Kone River Basin Feasibility Study																			
2. Dinh Binh Multipurpose Reservoir																			
2.1 Financial Arrangement																			
2.2 Approval of Project and Arrangement by GOV																			
2.3 Procurement of Consultant																			
2.4 Engineering Services (Basic Design, Detailed Design and Supervision)																			
2.5 Pre-qualification Tendering																			
2.6 International Competitive Bidding																			
2.7 Land Acquisition and Resettlement																			
2.8 Dinh Binh Reservoir Project (Concrete Dam)																			
2.9. Relocation Road																			
3. Van Phong Weir and Irrigation and Drainage System																			
3.1 Financial Arrangement																			
3.2 Approval of Project and Arrangement by GOV																			
3.3 Procurement of Consultant																			
3.4 Engineering Services (Basic Design, Detailed Design and Supervision)																			
3.5 Pre-qualification Tendering																			
3.6 International Competitive Bidding																			
3.7 Land Acquisition and Resettlement																			
3.8 Flood Control Facilities																			
4. Downstream Flood Control Plan																			
4.1 Financial Arrangement																			
4.2 Approval of Project and Arrangement by GOV																			
4.3 Procurement of Consultant																			
4.4 Engineering Services (Basic Design, Detailed Design and Supervision)																			
4.5 Pre-qualification Tendering																			
4.6 International Competitive Bidding																			
4.7 Land Acquisition and Resettlement																			
4.8 Irrigation and Drainage facilities																			

Hình 16.2 Kế hoạch thực hiện chung theo công trình

Description	Year																			
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
<b>1. Dinh Binh Multipurpose Reservoir</b>																				
1.1 Preparatory Works																				
1.2 River Diversion																				
1.3 Dam																				
- Dam Excavation																				
- Foundation Treatment																				
- Concrete Dam																				
1.4 Hydromechanical Works																				
1.5 Hydropower																				
- Powerhouse																				
- Generating Equipment																				
- Substation																				
1.6 Relocation Road																				
1.7 High Voltage Line																				
1.8 Financial Arrangement																				
1.9 Land Acquisition and Resettlement																				
1.10 Engineering Services by Consultants																				
<b>2. Van Phong Weir and Irrigation and Drainage System</b>																				
3.1 Preparatory Works																				
3.2 Van Phong Weir																				
- River Diversion and Cofferdam																				
- Weir																				
- Scouring Sluice and Intake Facilities																				
- Flood Dyke																				
3.3 Rehabilitation Works of Existing Weirs																				
- 7 Weirs																				
3.4 Construction of New Pumping Station																				
- 6 places																				
3.5 Main Irrigation System																				
- Canal																				
- Related Structures																				
3.6 Primary and Secondary Irrigation System																				
- Canal																				
- Related Structures																				
3.7 Drainage System																				
- Drain																				
- Related Structures																				
3.8 Farm Road Network																				
- Road																				
- Related Structures																				
3.9 On-farm System																				
- Improvement of Existing Facilities																				
- Rehabilitation and Improvement of Facilities																				
- New Construction of Facilities																				
3.10 Financial Arrangement																				
3.11 Land Acquisition and Resettlement																				
3.12 Engineering Services by Consultants																				
<b>3. Downstream Flood Control System</b>																				
3.1 Preparatory Works																				
3.2 Thi Nai Swamp																				
- Sea Dyke																				
- Improvement of Sluice Gates																				
- Improvement of Spillway																				
- New Construction of Spillway																				
3.3 Dap Da River																				
- Dyke																				
- Bridges																				
- Side Overflow Spillway																				
- New Construction of Sluice Gates																				
- Bank Protection works																				
- Reconstruction of Irrigation Weir																				
3.4 Go Cham River																				
- Dyke																				
- Bridges																				
- Side Overflow Spillway																				
- New Construction of Fixed Weir																				
- Reconstruction of Irrigation Weir																				
- Bank Protection works																				
3.5 Tan An River																				
- Dyke																				
- Bridges																				
- Side Overflow Spillway																				
- New Construction of Sluice Gates																				
- Improvement of Irrigation Weir																				
- Bank Protection works																				
3.6 Nam Yang River																				
- Dyke																				
- Bridges																				
- New Construction of Sluice Gates																				
- Bank Protection works																				
3.7 Ca My River																				
- Dyke																				
- Bank Protection works																				
3.8 Kone River																				
- Groyne																				
3.9 Financial Arrangement																				
3.10 Land Acquisition and Resettlement																				
3.11 Engineering Services by Consultants																				

Note : Marked with ... means design and manufacturing period.