CHAPTER 6

PROJECT IMPLEMENTATION AND

DISBURSEMENT SCHEDULE

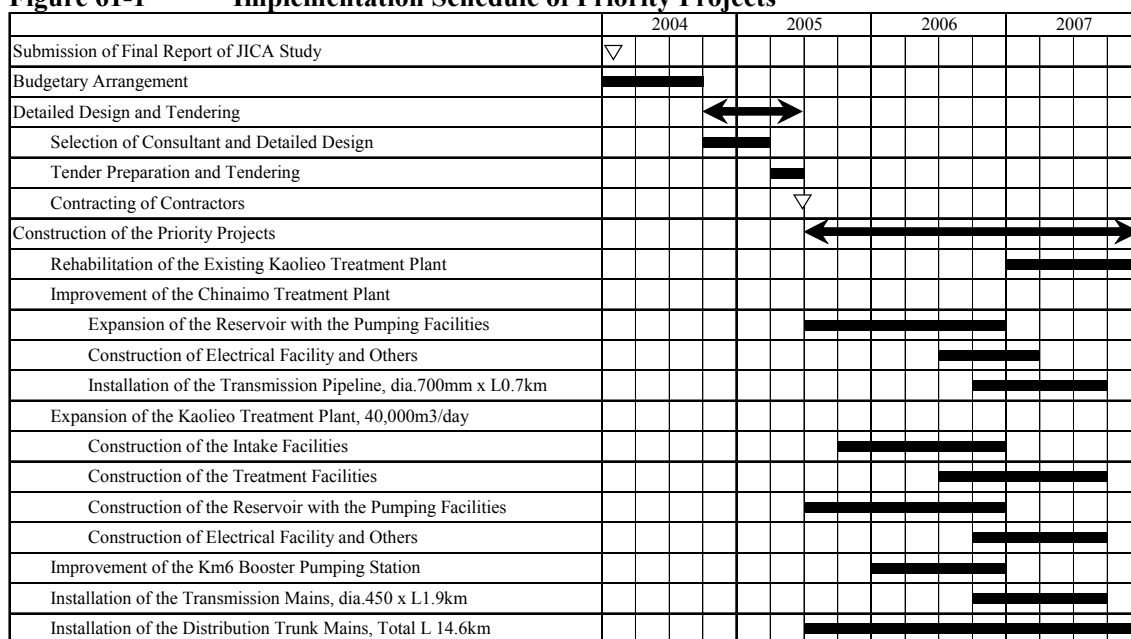# CHAPTER 6   PROJECT IMPLEMENTATION AND DISBURSEMENT SCHEDULE

6.1   Overall Implementation Schedule

The implementation schedule for the priority projects, which is a part of the 1st stage project for the target year 2007, are proposed as shown in Figure 61-1.

To satisfy the increasing water demand in the service area, the implementation of the priority projects should not be delayed from the proposed schedule, because the production capacity of 140,000 m3/day in 2007 after the completion of the 1st stage will not meet the daily maximum water demand after 2007.

In order to complete the priority projects by the end of 2007, the projects should be commenced in the middle of 2005, taking account the magnitude of the projects.   The construction works for the priority project will take two and half years at least.   It is, therefore, necessary to start the detailed design and tendering works from the end of 2004, following the budgetary arrangements.

Figure 61-1   Implementation Schedule of Priority Projects

	2004	2005	2006	2007
Submission of Final Report of JICA Study	▽			
Budgetary Arrangement	▬▬			
Detailed Design and Tendering	◄─►			
Selection of Consultant and Detailed Design	▬			
Tender Preparation and Tendering		▬		
Contracting of Contractors		▽		
Construction of the Priority Projects		◄─────►		
Rehabilitation of the Existing Kaolieo Treatment Plant				▬▬
Improvement of the Chinaimo Treatment Plant				
Expansion of the Reservoir with the Pumping Facilities		▬▬	▬▬	
Construction of Electrical Facility and Others			▬▬	
Installation of the Transmission Pipeline, dia.700mm x L0.7km			▬	▬
Expansion of the Kaolieo Treatment Plant, 40,000m3/day				
Construction of the Intake Facilities		▬▬		
Construction of the Treatment Facilities			▬▬	
Construction of the Reservoir with the Pumping Facilities		▬▬		
Construction of Electrical Facility and Others			▬▬	
Improvement of the Km6 Booster Pumping Station		▬▬		
Installation of the Transmission Mains, dia.450 x L1.9km			▬	▬
Installation of the Distribution Trunk Mains, Total L 14.6km		▬▬▬	▬▬	▬

6.2   Schedule of Construction Work

The important factors generally for making the implementation schedule of the construction works in Lao PDR are how the works should be considered during the rainy season and the high water level of the Mekong River during this season, especially for the construction of the intake facility. Almost all civil works relating to the priority projects can be carried out even during the rainy season, however the construction of the intake facility for the expansion of the Kaolieo Treatment Plant can not be done during the high water level season of the Mekong River from June to November. Therefore, the preparation works of the intake facility should commence in October 2005 and the civil works should start in November 2005.

Implementation of the scheduling should also consider the timing between the expansion works and the rehabilitation works of the Kaolieo Treatment Plant.   In this case, the expansion works are needed to be completed before the rehabilitation works.   Other construction works for the priority projects are not affected by the weather or the timing of the works with each other.

6.3 Disbursement Schedule

Based on the preliminary cost estimates in Chapter 5, and the implementation schedule mentioned above, the disbursement schedule for 1st stage projects are shown in Table 63-1.

Table 63-1　　　Disbursement Schedule　　　　(x 1,000 US$)

	Total			2004			2005			2006			2007		
	Total	Foreign	Local	Sub Total	Foreign	Local	Sub Total	Foreign	Local	Sub Total	Foreign	Local	Sub Total	Foreign	Local
A. Priority Projects by JICA Study															
A1. Construction Cost	20,312	13,341	6,971				2,366	1,388	979	8,829	5,611	3,218	9,117	6,343	2,774
A1.1 Rehabilitation of Kaolieo T.P.	3,024	2,217	806				0	0	0	0	0	0	3,024	2,217	806
A1.2 Improvement of Chinaimo T.P.	2,433	1,428	1,004				614	301	313	1,622	952	670	197	175	22
Reservoir with Pumping Facilities	1,841	902	939				614	301	313	1,227	601	626	0	0	0
Electrical and Other Facilities	592	526	66				0	0	0	395	351	44	197	175	22
A1.3 Expansion of Kaolieo T.P.	9,625	5,723	3,902				1,095	613	482	4,855	2,835	2,020	3,674	2,275	1,399
Construction of Intake Facility	2,002	1,365	637				400	273	127	1,602	1,092	510	0	0	0
Construction of Treatment Facility	3,193	1,521	1,672				0	0	0	1,277	608	669	1,916	912	1,003
Construction of Distribution Facility	2,085	1,021	1,065				695	340	355	1,390	680	710	0	0	0
Electrical and Other Facilities	2,345	1,817	528				0	0	0	586	454	132	1,758	1,362	396
A1.4 Improvement of Km6 BP Station	736	634	102				0	0	0	736	634	102	0	0	0
A1.5 Installation of Transmission Mains	1,211	970	240				0	0	0	303	243	60	908	728	180
A1.6 Installation of Distribution Mains	3,285	2,369	916				657	474	183	1,314	948	366	1,314	948	366
A2. Consulting Services, D/D and S/V　7%	1,422	934	488				474	311	163	474	311	163	474	311	163
A3. Contingencies	4,637	3,064	1,573				474	284	191	1,879	1,196	683	2,283	1,584	699
A3.1 Physical Contingency　= (1.+ 2.)×　(10)%	2,173	1,427	746				284	170	114	930	592	338	959	665	294
A3.2 Price Contingency = (1.+ 2. + 3.1)×rate$^{2004\sim}$　(3)%	2,463	1,637	827				190	114	76	949	604	345	1,324	919	405
A4. Administration Cost　= (1.+ 2. +3.)×　5%	1,319	0	1,319				166	0	166	559	0	559	594	0	594
Total Project Costs for A　= (1.+ 2. +3. +4.)	**27,689**	**17,339**	**10,350**				**3,480**	**1,983**	**1,497**	**11,741**	**7,119**	**4,623**	**12,468**	**8,238**	**4,230**
B. Other Projects															
B1. Construction Cost	5,711	4,107	1,604	604	403	201	1,195	842	353	1,985	1,448	537	1,927	1,414	513
B1.1 Installation of Distribution Mains	3,108	2,325	783	0	0	0	622	465	157	1,243	930	313	1,243	930	313
B1.2 Secondary & Tirtially Distribution Mains	606	510	96	115	97	18	108	91	17	196	165	31	187	157	30
B1.3 House Connection Installation	752	620	132	148	122	26	148	122	26	228	188	40	228	188	40
B1.4 Unaccounted-for Water Reduction	1,245	652	593	341	184	157	317	164	153	318	165	153	269	139	130
B2. Consulting Services, D/D and S/V　7%	400	287	112	100	72	28	100	72	28	100	72	28	100	72	28
B3. Contingencies	1,214	877	337	94	63	30	216	153	64	421	307	114	483	354	129
B3.1 Physical Contingency　= (1.+ 2.)×　(10)%	611	439	172	70	47	23	129	91	38	209	152	57	203	149	54
B3.2 Price Contingency = (1.+ 2. + 3.1)×rate$^{2004\sim}$　(3)%	603	437	165	23	16	8	87	61	26	213	155	58	280	205	75
B4. Administration Cost　= (1.+ 2. +3.)×　5%	366	0	366	40	0	40	76	0	76	125	0	125	125	0	125
Total Project Costs for B　= (1.+ 2. +3. +4.)	**7,691**	**5,271**	**2,420**	**837**	**538**	**299**	**1,586**	**1,066**	**520**	**2,632**	**1,827**	**805**	**2,635**	**1,840**	**796**