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**ANNEX-33**

**FUTURE POPULATION  
FORECAST**

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## 2-2 PAST POPULATION RECORD BY KELURAHAN (1984 - 1993)

Propinsi	Kecamatan	Kelurahan	Area 1993 (ha)	Population (CENSUS)									
				1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
		[002] SRENGSENG SAWAH	675	30,173	31,215	22,296	24,308	23,744	24,767	33,096	27,414	27,696	30,215
		[003] JAGAKARSA	483	14,976	16,048	17,778	18,687	19,886	22,194	27,144	25,427	27,240	28,774
		[004] LENTENG AGUNG	228	8,752	11,745	29,156	29,973	31,042	31,991	33,236	36,053	37,688	39,321
		[005] TANJUNG BARAT	365	22,681	24,346	25,256	17,485	18,150	19,148	21,373	21,282	22,372	23,421
		[006] CIPEDAK(<-CIGANJUR'91)	397	6,706	7,148	8,729	9,217	9,748	10,395	14,219	13,273	14,102	14,995
		<b>Total</b>	2,502	89,893	97,541	111,812	108,748	112,170	118,732	143,072	136,521	143,126	151,661
	[040] MAMPANG PRAPATAN												
		[001] BANGKA	330	14,957	14,727	18,578	19,252	19,709	20,367	29,559	21,142	21,488	21,516
		[002] PELA MAMPANG	162	41,166	40,652	40,815	41,797	42,477	43,336	51,090	45,578	46,557	47,438
		[003] TEGAL PARANG	106	15,743	16,131	17,394	17,745	17,986	18,298	29,586	18,996	19,243	19,606
		[004] MAMPANG PRAPATAN	78	18,638	19,266	20,820	21,152	21,448	22,204	21,386	22,345	22,598	22,845
		[005] KUNINGAN BARAT	98	17,710	18,083	18,729	19,028	19,426	19,458	17,044	19,054	18,849	18,766
		<b>Total</b>	774	108,214	108,859	116,336	118,974	121,046	123,663	148,665	127,115	128,735	130,171
	[041] PANCORAN (<-[040]'87)												
		[001] KALI BATA	220	23,190	24,592	33,167	33,589	34,104	34,830	41,906	35,351	35,673	36,029
		[002] RAWA JATI	67	9,609	9,737	10,126	9,642	9,865	10,384	11,499	15,244	15,713	16,479
		[003] DUREN TIGA	245	21,841	22,212	23,757	23,925	24,441	24,433	32,843	24,677	25,026	25,529
		[004] PENGADEGAN	95	12,438	12,685	17,658	17,878	18,327	18,884	20,147	21,498	22,014	22,493
		[005] CIKOKO	72	9,492	9,672	9,933	11,418	11,471	11,620	12,203	12,586	12,797	13,077
		[006] PANCORAN	124	19,957	21,200	18,145	18,693	19,359	20,026	22,775	19,197	19,732	20,162
		<b>Total</b>	823	96,527	100,098	112,786	115,145	117,567	120,177	141,373	128,553	130,955	133,769
	[050] KEBAYORAN BARU												
		[001] GANDARIA UTARA	152	44,649	46,084	46,162	46,081	46,624	47,154	44,260	49,147	49,905	50,825
		[002] CIPETE UTARA	183	33,914	34,524	30,456	31,208	32,044	32,824	38,368	34,531	35,340	35,915
		[003] PULO	127	15,006	15,216	14,508	11,564	11,174	11,316	9,251	9,264	9,336	11,390
		[004] PETOGOGAN	86	17,409	17,517	15,943	16,292	16,649	17,051	14,558	17,756	18,109	18,440
		[005] MELAWAI	126	7,067	6,732	6,953	6,513	6,585	6,551	5,529	6,247	6,282	6,364
		[006] KRAMAT PELA	123	19,425	19,820	17,537	17,540	17,669	17,991	16,721	18,153	18,354	18,572
		[007] GUNUNG	132	15,445	15,542	14,994	15,070	15,169	15,469	14,904	15,720	15,905	16,034
		[008] SELONG	140	6,017	6,012	5,997	6,284	6,106	6,228	6,652	6,201	6,233	6,331
		[009] RAWA BARAT	69	10,889	10,683	10,795	9,048	9,214	9,090	9,173	9,153	9,311	9,427
		[010] SENJAYAN	153	36,173	35,916	35,830	34,645	34,940	35,242	27,449	28,215	21,539	20,631
		<b>Total</b>	1,291	205,994	208,046	199,175	194,245	196,174	198,916	186,865	194,387	190,314	193,929
	[060] SETIA BUDI												
		[001] KARET SEMANGGI	90	11,983	11,634	14,536	12,847	12,968	12,669	12,349	10,173	8,878	8,171
		[002] KUNINGAN TIMUR	215	10,430	10,603	10,576	10,736	11,029	11,155	18,966	10,873	9,549	8,270

Annex 33



## 2-4 PAST POPULATION RECORD BY KELURAHAN (1984 - 1993)

Propinsi	Kabupaten / Kotamadya	Kecamatan Kelurahan	Area 1993 (ha)	Population (CENSUS)									
				1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
		[004] CIPAYUNG	308	3,434	4,575	5,189	5,812	6,422	7,021	10,526	8,497	9,164	9,701
		[005] SETU	308	3,936	4,156	5,092	5,266	5,486	5,708	5,177	6,271	6,522	6,844
		[006] BAMBUPUS	317	4,946	5,355	5,726	6,365	6,982	7,603	12,253	8,995	9,846	10,509
		[007] CEGER	363	4,275	4,575	4,721	5,116	5,502	5,869	15,192	6,790	7,381	7,809
		[008] LUBANG BUAYA	372	15,688	16,896	17,857	18,757	19,710	20,973	29,080	24,574	26,266	27,721
		<b>Total</b>	<b>2,735</b>	<b>47,951</b>	<b>51,918</b>	<b>55,989</b>	<b>59,578</b>	<b>63,386</b>	<b>67,312</b>	<b>100,860</b>	<b>77,203</b>	<b>82,559</b>	<b>87,272</b>
		[020] KRAMAT JATI											
		[001] BALE KAMBANG	167	9,683	9,960	10,242	10,695	11,464	11,974	16,894	13,571	14,183	14,892
		[002] BATU AMPAR	255	20,021	21,052	21,548	22,419	23,501	24,394	34,557	26,777	27,825	28,697
		[003] KAMPUNG TENGAH	203	16,167	16,762	20,106	20,817	21,648	22,425	39,338	23,783	24,277	24,836
		[004] DUKUH	198	8,265	8,696	9,246	9,805	10,329	10,962	17,605	12,527	13,146	13,599
		[005] KRAMAT JATI	152	27,237	27,197	27,504	27,180	26,704	26,558	30,551	27,270	27,567	27,675
		[006] CILILITAN	180	34,136	34,759	35,040	35,524	35,876	36,248	37,298	37,221	37,498	37,847
		[007] CAWANG	179	34,132	35,204	36,025	36,826	37,446	38,103	35,514	39,167	39,709	39,815
		<b>Total</b>	<b>1,334</b>	<b>149,641</b>	<b>153,630</b>	<b>159,711</b>	<b>163,266</b>	<b>166,968</b>	<b>170,664</b>	<b>211,757</b>	<b>180,316</b>	<b>184,205</b>	<b>187,361</b>
		[021] MAKASAR (<-[020]'87)											
		[001] PINANG RANTI	189	8,183	8,237	7,933	7,995	8,214	8,219	13,436	11,642	11,422	11,416
		[002] MAKASAR	185	21,638	22,820	23,697	24,714	25,532	26,336	31,767	25,353	26,176	27,042
		[003] KEBON PALA	230	25,488	26,225	27,072	27,946	28,999	29,851	38,155	32,087	32,751	33,135
		[004] HALIM PERDANA KUSUMA	1,307	36,865	35,498	35,193	35,651	35,922	36,064	28,722	37,379	38,328	38,958
		[005] CIPINANG MELAYU	253	20,878	22,452	24,094	25,679	27,432	29,010	34,452	32,500	34,004	35,343
		<b>Total</b>	<b>2,164</b>	<b>113,052</b>	<b>115,232</b>	<b>117,989</b>	<b>121,985</b>	<b>126,099</b>	<b>129,480</b>	<b>146,532</b>	<b>138,961</b>	<b>142,681</b>	<b>145,894</b>
		[030] JATINEGARA											
		[001] BIDARA CINA	126	42,274	42,775	42,615	43,028	43,527	43,620	37,749	44,771	45,331	45,545
		[002] CIPINANG CEMPEDAK	167	40,933	40,876	41,052	41,530	41,910	41,800	38,340	42,468	42,585	42,741
		[003] CIPINANG BESAR SELATAN (<-C.B.'87)	163	20,590	20,431	20,696	21,232	21,762	21,984	32,129	22,335	22,389	22,584
		[004] CIPINANG MUARA	290	43,591	45,810	47,517	49,344	50,102	51,520	56,278	53,711	54,698	55,861
		[005] CIPINANG BESAR UTARA (<-CIP.B.'87)	115	33,875	33,613	34,050	34,931	35,252	35,698	51,364	36,975	37,520	38,337
		[006] RAWA BUNGA	88	29,448	29,798	29,567	30,338	30,362	30,536	23,541	30,950	31,093	31,071
		[007] BALI MESTER	67	16,290	16,400	13,767	13,864	13,931	14,020	12,616	13,669	13,281	13,597
		[008] KAMPUNG MELAYU	48	24,663	24,876	24,418	24,641	24,951	25,009	25,561	25,589	25,985	26,012
		<b>Total</b>	<b>1,064</b>	<b>251,664</b>	<b>254,579</b>	<b>253,682</b>	<b>258,908</b>	<b>261,797</b>	<b>264,187</b>	<b>277,578</b>	<b>270,468</b>	<b>272,882</b>	<b>275,848</b>
		[031] DUREN SAWIT (<-[030]'87)											
		[001] PONDOK BAMBUI	500	32,336	34,164	35,459	36,507	38,111	39,521	55,121	41,683	42,166	42,916
		[002] DUREN SAWIT	458	22,039	23,783	25,391	26,927	28,281	29,529	41,587	31,576	32,905	33,925
		[003] PONDOK KELAPA	572	16,148	18,294	20,302	21,881	23,276	24,709	37,765	29,403	34,777	34,340

## 2-5 PAST POPULATION RECORD BY KELURAHAN (1984 - 1993)

Propinsi	Kabupaten	Kecamatan	Kelurahan	Area (ha)	Population (CENSUS)											
					1993	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	
					Total	2,281	175,522	189,773	205,068	213,955	221,888	231,659	290,246	250,243	261,558	266,799
		[040] MATRAMAN														
			[004] PONDOX KOPI(<-MALAKA'87)	206	17,869	19,528	21,685	22,493	23,440	24,456	25,752	26,543	27,335	28,341		
			[005] MALAKA JAYA(<-MALAKA'87)	99	29,000	31,691	35,193	36,504	37,428	38,029	34,426	39,930	40,983	41,762		
			[006] MALAKA SAR(<-MALAKA'87)	138	23,273	25,433	28,243	29,295	29,033	31,319	30,307	33,651	34,673	35,532		
			[007] KLENDER	308	34,857	36,880	38,794	40,348	42,319	44,096	65,288	47,457	48,719	49,985		
			Total	2,281	175,522	189,773	205,068	213,955	221,888	231,659	290,246	250,243	261,558	266,799		
		[050] PULO GADUNG														
			[001] PISANGAN TIMUR	180	41,903	43,698	42,334	42,859	43,696	43,460	42,505	44,387	44,799	45,135		
			[002] CIPINANG	154	36,109	36,588	37,163	37,883	39,239	40,737	40,579	41,648	42,329	42,942		
			[003] JATINEGARA KAUM	123	14,689	17,494	19,445	19,919	20,152	20,423	23,639	21,240	21,471	22,032		
			[004] JATI(<-JATI RAW'87)	215	26,212	26,790	27,260	30,374	31,275	31,794	39,036	32,732	33,011	33,060		
			[005] RAWAMANGUN(<-JATI RAW'87)	260	40,592	41,485	42,215	47,036	47,471	47,808	47,583	48,540	48,946	49,319		
			[006] PULO GADUNG	192	8,190	10,139	19,765	20,306	20,637	20,881	35,590	21,553	21,637	21,670		
			[007] KAYU PUTIH	437	53,738	55,435	40,933	41,711	42,439	43,263	50,171	45,161	46,157	46,586		
			Total	1,561	221,433	231,629	229,115	240,088	244,909	248,366	279,103	255,261	258,350	260,744		
		[060] CAKUNG														
			[001] JATINEGARA	660	29,057	29,757	30,833	31,786	32,947	33,520	74,961	43,328	43,994	44,650		
			[002] PENGHILANGAN	448	20,495	22,288	23,911	26,264	28,238	30,237	67,812	35,095	36,767	37,976		
			[003] PULO GEBANG	686	19,454	23,030	25,518	28,191	30,590	32,504	50,718	36,317	38,172	39,778		
			[004] UJUNG MENTENG	443	8,809	9,391	9,725	9,847	10,083	10,633	18,175	11,496	11,850	12,043		
			[005] CAKUNG TIMUR(<-CAKUNG'87)	981	15,656	16,291	7,384	18,743	20,591	21,419	36,131	22,358	23,033	23,762		
			[006] CAKUNG BARAT(<-CAKUNG'87)	619	19,829	20,632	9,352	23,738	22,632	23,100	43,566	30,618	30,975	31,195		
			[007] RAWA TERATE	410	11,903	12,702	12,389	12,730	12,990	13,277	24,463	17,870	18,140	18,190		
			Total	4,247	125,203	134,091	119,112	151,299	158,071	164,690	315,826	197,082	202,931	207,594		
		[73] JAKARTA TIMUR-TOTAL			18,773	1,405,551	1,467,465	1,491,946	1,575,190	1,620,951	1,654,694	1,783,836	1,830,695	1,867,498		
		[010] TANAH ABANG														
			[001] GEJORA	259	9,310	9,059	9,096	8,925	8,423	8,173	3,764	6,457	6,122	3,209		
			[002] BENDUNGAN HILIR	158	32,340	31,961	32,007	34,405	33,092	33,264	28,739	33,893	34,289	34,392		

2-6 PAST POPULATION RECORD BY KELURAHAN (1984 - 1993)

Propinsi	Kabupaten	Kecamatan	Kelurahan	Area 1993 (ha)	Population (CENSUS)									
					1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
			[003] KARET TENGIN	153	48,396	47,972	50,252	45,737	44,195	42,885	31,007	27,723	25,945	24,769
			[004] PETAMBURAN	90	30,946	30,951	31,046	30,238	30,823	30,452	33,486	30,823	30,823	31,043
			[005] KEBON MELATI	126	54,606	54,621	53,862	54,036	53,675	53,319	49,809	51,180	47,041	40,113
			[006] KEBON KACANG	71	28,394	28,944	29,407	29,632	29,704	29,568	27,597	28,775	28,641	28,444
			[007] KAMPUNG BALI	73	24,339	24,259	24,226	24,224	24,038	23,338	17,750	22,004	21,700	21,584
			Total	930	228,331	227,767	229,896	227,197	223,975	220,999	192,152	200,855	194,561	183,554
		[020] MENTENG												
			[001] MENTENG	244	37,115	37,677	37,700	37,677	38,389	38,620	30,806	39,544	39,986	40,342
			[002] PEGANGSAAN	98	28,846	29,096	29,066	29,455	29,585	29,746	23,857	30,257	30,487	30,488
			[003] CIKINI	82	14,226	14,132	14,241	14,350	14,327	14,248	13,451	13,332	13,254	13,278
			[004] GONDANGDIA	146	8,744	9,077	8,776	8,823	8,840	8,773	6,769	8,941	8,918	8,894
			[005] KEBON SIRIH	83	26,891	27,170	26,798	26,870	26,709	25,722	15,891	23,393	22,918	22,574
			Total	653	115,822	117,152	116,581	117,175	117,850	117,109	90,774	115,467	115,563	115,576
		[030] SENEN												
			[001] KENARI	91	14,422	14,490	14,512	14,559	14,589	14,574	10,936	14,585	14,628	14,639
			[002] PASEBAN	71	31,411	31,184	31,051	30,696	30,727	30,422	26,283	28,165	28,168	28,031
			[003] KRAMAT	71	30,806	30,851	30,631	30,677	30,645	30,096	28,147	30,735	30,758	30,837
			[004] KWITANG	45	17,950	17,840	17,899	18,022	17,884	17,692	17,005	17,913	18,003	17,689
			[005] SENEN	81	10,821	10,596	10,494	10,309	10,201	7,999	9,196	7,815	7,221	6,589
			[006] BUNGUR	64	29,752	29,777	29,960	29,849	29,847	29,070	21,022	30,078	30,108	29,316
			Total	423	135,162	134,738	134,547	134,112	133,893	129,853	112,589	129,291	128,886	127,101
		[040] CEMPAKA PUTIH												
			[001] RAWA SARI	125	22,608	22,513	22,729	24,523	23,120	23,419	25,604	23,753	23,731	23,808
			[002] CEMPAKA PUTIH TIMUR	222	24,984	25,507	25,818	26,066	26,197	26,664	28,785	27,268	27,573	27,839
			[003] CEMPAKA PUTIH BARAT	122	34,909	35,507	35,853	36,015	36,118	36,442	38,108	36,437	36,753	36,901
			Total	469	82,501	83,527	84,400	86,604	85,435	86,525	92,497	87,458	88,057	88,548
		[041] JOHAR BARU (<-[040]'87)												
			[001] JOHAR BARU	119	35,317	35,812	35,885	35,446	34,994	34,933	39,197	36,406	36,823	37,476
			[002] KAMPUNG RAWA	30	18,617	19,188	18,421	17,946	17,964	17,419	22,846	22,731	17,715	17,588
			[003] GALUR	27	18,956	19,166	20,283	19,603	18,320	17,997	19,750	18,306	18,428	18,263
			[004] TANAH TINGGI	62	41,205	39,059	38,261	37,704	37,139	36,499	41,073	36,602	36,365	35,575
			Total	238	114,095	113,225	112,850	110,699	108,417	106,848	122,866	114,045	109,331	108,902
		[050] KEMAYORAN												
			[001] HARAPAN MULYA	53	21,679	21,610	21,722	25,090	25,533	25,832	25,631	26,870	27,390	27,779
			[002] CEMPAKA BARU (<-HAR.M.'87)	99	32,052	31,950	32,116	37,096	37,542	38,197	36,862	39,271	37,015	37,288
			[003] SUMUR BATU (<-HAR.M.'87)	115	16,859	16,805	16,893	19,512	20,007	20,565	24,096	21,262	21,504	21,764



## 2-8 PAST POPULATION RECORD BY KELURAHAN (1984 - 1993)

Propinsi	Kecamatan	Kelurahan	Area 1993 (ha)	Population (CENSUS)										
				1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
				476	15,627	17,164	18,506	19,250	20,356	21,310	30,711	23,439	24,110	24,608
		[004] MERUYA ILIR		361	8,272	8,751	9,036	9,498	10,023	10,586	20,279	11,713	12,198	12,668
		[005] KEMBANGAN SELATAN(<-KEMBANG		364	12,035	12,729	13,144	13,816	14,581	15,400	29,500	17,039	17,744	18,428
		[006] KEMBANGAN UTARA(<-KEMBANGA		Total	69,030	77,166	81,043	85,261	88,656	94,450	157,233	104,447	108,143	111,242
	[020] CENGKARENG			503	12,691	13,321	13,839	14,372	14,871	15,443	44,293	24,080	25,887	27,402
		[001] DURI KOSAMBI		467	16,703	16,954	17,423	19,905	20,517	21,382	44,844	19,356	20,033	20,880
		[002] RAWA BUAYA		261	16,670	16,908	17,131	18,224	17,636	17,808	35,158	19,913	20,829	20,007
		[003] KEDAUNG KALI ANGKE		718	40,074	42,213	44,014	45,647	46,523	49,313	151,329	42,590	44,769	46,691
		[004] KAPUK		418	27,248	28,020	16,357	29,100	29,414	30,137	44,156	40,589	41,609	42,789
		[005] CENGKARENG TIMUR(<-CENGKARE		426	36,821	37,864	22,104	39,323	39,392	39,890	48,189	38,851	39,615	40,609
		[006] CENGKARENG BARAT(<-CENGKARE		Total	150,207	155,280	130,868	166,571	168,353	173,973	367,969	185,379	192,742	198,378
	[021] KALI DERES (<-[020]'87)			598	18,761	19,579	20,209	20,711	21,290	21,753	39,748	22,946	23,550	24,534
		[001] SEMANAN		493	21,858	22,674	23,166	23,614	24,389	25,038	44,635	27,873	29,183	29,546
		[002] KALI DERES		595	10,746	11,252	11,728	12,190	12,942	13,484	24,039	15,977	17,286	18,089
		[003] PEGADUNGAN		778	25,661	28,864	29,814	30,672	32,812	32,425	53,677	30,470	31,668	32,530
		[004] TEGAL ALUR		276	7,448	8,464	9,230	9,458	9,550	9,615	13,397	15,763	16,220	16,355
		[005] KAMAL		Total	84,474	90,833	94,147	96,645	100,983	102,315	175,496	113,029	117,907	121,054
	[030] GROGOL PETAMBURAN			188	41,334	41,398	41,719	41,816	42,122	42,421	40,762	43,501	43,976	44,299
		[002] TOMANG		122	26,329	26,878	27,154	26,626	26,704	26,769	24,101	26,956	27,220	27,611
		[003] GROGOL		144	37,272	37,160	37,723	39,425	39,125	39,302	36,769	39,868	40,393	40,758
		[004] JELAMBAR		261	27,732	27,649	28,067	29,334	18,795	19,733	37,826	22,147	22,948	23,520
		[005] WIJAYA KESUMA(<-JELAMBAR'87)		144	40,499	40,378	40,989	42,839	43,165	38,534	50,220	39,872	40,277	33,454
		[006] JELAMBAR BARU(<-JELAMBAR'87)		106	28,122	28,206	27,469	28,231	28,549	28,541	29,542	28,214	28,343	28,355
		[007] TANJUNG DUREN UTARA(<-T.D.'93)		164	21,699	21,764	21,195	21,784	23,028	22,023	22,795	21,770	21,869	21,879
		[008] TANJUNG DUREN SELATAN(<-T.D.'93)		Total	222,987	223,434	224,316	230,055	220,488	217,323	242,015	222,328	225,026	219,876
	[031] PALMERAH (<-[030]'87)			211	46,737	46,932	48,556	48,919	49,287	50,027	67,819	50,468	51,444	52,092
		[001] PALMERAH		97	19,560	19,974	20,383	20,730	20,960	21,316	20,540	21,013	20,984	18,888
		[002] SLIPI		233	34,547	34,692	35,892	36,160	36,310	36,606	41,830	37,498	37,708	37,745
		[003] KEMANGGISAN(<-PALMERAH'87)		87	29,458	29,986	29,444	29,620	31,691	30,009	32,358	32,032	32,446	32,779
		[004] JATI PULO		65	26,831	27,050	27,323	26,942	27,063	27,075	28,748	26,996	26,966	26,692
		[005] KOTA BAMBUTARA(<-K.BAMBUTARA'93)		61	24,052	24,248	24,492	24,150	24,259	24,270	25,770	24,199	24,172	23,888
		[006] KOTA BAMBUTARA(<-K.BAMBUTARA'93)		754	181,185	182,882	186,090	186,521	189,570	189,303	217,065	192,206	193,720	192,039
		[007] KOTA BAMBUTARA SELATAN(<-K.BAMBUTARA SELATAN'93)		Total	181,185	182,882	186,090	186,521	189,570	189,303	217,065	192,206	193,720	192,039



## 2-10 PAST POPULATION RECORD BY KELURAHAN (1984 - 1993)

Propinsi	Kabupaten	Kecamatan	Kelurahan	Desa	Population											
					1993	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	
				(Ors)	Total	1.191	117.576	116.536	118.203	115.669	116.994	114.577	144.743	120.331	119.976	120.973
		[020]	TANJUNGPRIOK													
			[001]	SUNTER AGUNG(<-SUNTER'87)	665	23.153	25.087	33.718	35.729	37.724	40.081	64.204	45.460	47.433	49.073	
			[002]	SUNTER JAYA(<-SUNTER'87)	468	24.998	27.087	36.405	38.576	40.625	42.714	57.522	46.965	48.865	50.224	
			[003]	KEBON BAWANG	173	48.883	49.447	49.892	49.868	50.144	66.173	53.825	52.635	53.785	54.809	
			[004]	PAPANGO	280	25.034	24.852	24.658	24.492	24.976	25.305	33.287	24.498	25.177	26.610	
			[005]	WARAKAS(<-PAPANGO'87)	109	44.652	44.326	43.981	43.684	43.839	44.043	47.609	46.100	45.575	46.145	
			[006]	SUNGAI BAMBU	236	26.311	25.717	31.362	29.974	30.151	30.362	32.055	30.748	30.952	30.993	
			[007]	TANJUNGPRIUK	559	31.021	30.370	30.008	29.933	29.178	28.694	39.770	29.164	28.304	28.038	
			Total	2.490	224.052	226.886	250.024	252.256	256.637	277.372	328.272	275.570	280.091	285.892		
		[030]	KOJA													
			[001]	TUGU SELATAN	186	5.855	6.029	9.396	9.040	9.817	11.065	22.422	10.845	11.705	12.341	
			[002]	RAWA BADAQ	325	38.276	39.416	61.422	59.097	55.623	56.068	68.709	59.820	59.996	61.463	
			[003]	TUGU UTARA	237	43.760	44.353	38.476	39.750	44.780	51.545	64.432	40.566	41.134	41.789	
			[004]	LAGOA	158	57.385	56.906	56.120	55.665	55.473	54.933	62.312	54.583	54.290	54.691	
			[005]	KOJA SELATAN	83	21.924	21.461	21.460	30.523	30.286	30.330	29.689	30.904	30.853	30.863	
			[006]	KOJA UTARA	145	40.678	39.320	39.286	38.283	37.929	37.892	40.707	37.246	36.824	36.627	
			Total	1.134	207.878	207.485	226.160	232.358	233.908	241.833	288.271	233.964	234.802	237.774		
		[031]	KELAPA GADING (<-[030]'87)													
			[001]	KELAPA GADING BARAT(<-K.G.'87)	453	13.145	16.280	14.722	13.999	15.633	15.500	21.215	16.384	16.977	17.698	
			[002]	KELAPA GADING TIMUR(<-K.G.'87)	531	26.466	32.780	29.642	28.186	29.345	31.248	44.313	34.728	37.432	37.109	
			[003]	PEGANGSAAN DUA	628	6.771	6.772	14.889	16.056	18.034	20.557	37.695	26.100	28.298	29.683	
			Total	1.612	46.382	55.832	59.253	58.241	63.012	67.305	103.223	77.212	82.707	84.490		
		[040]	CILINCING													
			[001]	SUKA PURA	561	11.448	12.728	13.661	14.588	15.599	17.372	34.800	20.220	20.822	21.687	
			[002]	ROROTAN(<-SUKA PURA'87)	1.064	8.575	9.534	10.233	10.927	11.211	11.525	14.618	12.104	12.603	13.021	
			[003]	MARUNDA	792	3.583	3.913	5.052	5.589	5.871	6.136	7.697	6.627	7.016	7.477	
			[004]	CILINCING	831	18.317	18.896	18.414	18.514	19.012	19.826	27.507	20.994	21.779	22.360	
			[005]	SEMPER TIMUR(<-SEMPER'87)	317	21.539	21.748	22.036	23.496	23.646	23.477	25.105	23.893	24.213	24.636	
			[006]	SEMPER BARAT(<-SEMPER'87)	444	45.834	46.279	46.890	49.998	50.321	52.001	56.573	53.949	54.386	54.951	
			[007]	KALI BARU	247	44.723	45.564	45.593	46.469	46.942	46.877	55.248	45.450	45.615	45.565	
			Total	4.256	154.019	158.662	161.879	169.581	172.602	177.214	221.548	183.237	186.434	189.697		
		[050]	KEPULAUAN SERIBU													
			[001]	PULAU TIDUNG	175	3.713	3.794	3.799	3.831	3.899	3.941	4.189	4.017	4.120	4.172	
			[002]	PULAU UNTUNG JAWA	215	1.101	1.145	1.168	1.180	1.200	1.219	1.142	1.268	1.294	1.312	
			[003]	PULAU PANGGANG	98	3.080	3.102	3.150	3.207	3.368	3.443	3.599	3.568	3.620	3.674	

Annex-33  
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## 2-II PAST POPULATION RECORD BY KELURAHAN (1984 - 1993)

Propinsi:	Kecamatan	Kabupaten	Kelurahan	Area 1993 (ha)	Population (CENSUS)									
					1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
			[004] PULAU KELAPA	692	4,780	5,433	5,467	5,606	5,620	5,643	5,896	5,614	5,668	5,709
			Total	1,180	12,674	13,474	13,584	13,824	14,087	14,246	14,826	14,467	14,702	14,867
			JAKARTA UTARA-Total	15,411	870,236	898,457	900,254	990,911	1,009,465	1,048,167	1,362,948	1,067,325	1,083,247	1,100,291
			D.KILJAKARTA-Total	66,126	6,203,191	6,329,191	6,472,492	6,760,910	6,864,662	7,003,267	8,222,515	7,206,853	7,309,734	7,394,998
[32] JAWA BARAT			[03] BOGOR											
			[150] CIMANGGIS											
			[001] CILANGKAP	584							16,685			
			[002] CIMPAEUN	422							9,926			
			[003] TAPOS	554							8,951			
			[004] LEUWINGANGGUNG	483							6,236			
			[005] JATIJARAR	269							11,642			
			[006] SUKAMAJU BARU	546							20,692			
			[007] GURUG	107							13,091			
			[008] SUKATANI	583							15,617			
			[009] HARJAMUKTI	626							9,059			
			[010] CISALAK PASAR	225							14,349			
			[011] MEKARSARI	335							26,955			
			[012] TUGU	363							51,674			
			[013] PASIR GUNUNG SELATAN	243							15,431			
			Total	5,340	106,831	111,837	113,629	130,831	139,815	149,639	220,308	209,811	208,919	218,277
			[200] SAWANGAN											
			[001] DUREN MEKAR	237							3,592			
			[002] DUREN SERIBU	279							5,069			
			[003] PENGASIHAN	407							5,117			
			[004] BEDAHAN	603							6,642			
			[005] PASIR PUTIH	488							6,396			
			[006] SAWANGAN BARU	269							5,850			
			[007] SAWANGAN LAMA	197							6,812			
			[008] BOJONG SARI LAMA	222							6,102			
			[009] BOJONG SARI BARU	364							3,738			
			[010] CURUG	411							6,181			
			[011] PONDOK PETIR	296							5,672			
			[012] SERUA	162							5,218			
			[013] KEDAUNG	124							5,055			
			[014] CINANGKA	543							5,364			

## 2-12 PAST POPULATION RECORD BY KELURAHAN (1984 - 1993)

Propinsi	Kabupaten /Kotamadya	Kecamatan	Kelurahan	Area											
				1993	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	
				Total	4,602	56,639	57,779	58,435	59,413	63,959	67,568	76,808	84,220	85,775	87,758
												CENSUS'90:[200]-[201]=165,380			
			[201] LIMO (-[200]'92)		197							3,049			
			[001] MERUYUNG		374							5,456			
			[002] GROGOL		160							4,781			
			[003] KRUKUT		524							6,879			
			[004] LIMO		349							10,375			
			[005] CINERE		297							7,572			
			[006] GANDUL		130							5,364			
			[007] PANGKALAN JATI BARU		277							6,651			
			[008] PANGKALAN JATI LAMA												
			Total	2,308	43,337	44,209	44,712	45,460	48,939	51,700	50,127	64,442	65,631	66,692	
		[720] BEJI													
			[001] BEJI		164										
			[002] DEJI TIMUR		187										
			[003] KEMIRIBUKA		360										
			[004] PONDOK CINA		340										
			[005] KUKUSAN		322										
			[006] TANAH BARU		241										
			Total	1,614	38,858	40,661	41,736	42,439	44,025	46,264	71,034	54,099	58,447	63,111	
			BOGOR-Total	13,864	245,665	254,486	258,512	278,143	296,738	315,171	418,277	472,572	418,772	435,838	
		[18] BEKASI													
			[010] PONDOK GEDE												
			[001] JATI KARYA		842										
			[002] JATI SAMPURNA		419										
			[003] JATI RANGGA		513										
			[005] JATI RANGGON		350										
			[006] JATI MURNI		304										
			[011] JATI WARNA		437										
			[012] JATI RAHAYU		350										
			[013] JATI WARINGIN		651										
			[014] JATI MAKMUR		396										
			[016] JATI BENING		608										
			Total	4,868	90,753	94,344	105,620	121,505	124,308	129,165	206,512	206,660	206,807	206,955	
			[011] JATI ASIH (-[010]'92)												
			[001] JATI SARI		617										
			[002] JATI LUHUR		400										
			Total	1,017	10,171	10,344	11,120	11,505	11,733	12,165	19,922	19,922	19,922	19,922	



## 2-14 PAST POPULATION RECORD BY KELURAHAN (1984 - 1993)

Propinsi	Kabupaten	Kecamatan	Kelurahan	Area 1993 (ha)	Population									
					1984	1985	1986	1987	1988	1989	1990 (CENSUS)	1991	1992	1993
			[019] CIRENDEU	350				8,181	8,361	8,391	16,958	17,992	19,000	20,120
			[020] REMFOA	258				14,490	14,479	14,479	24,741	26,250	27,720	29,356
			[021] RENGAS	182				10,725	9,123	9,291	17,514	18,580	19,623	20,782
			<b>Total</b>	<b>3,580</b>	<b>87,646</b>	<b>103,038</b>	<b>112,713</b>	<b>114,084</b>	<b>120,611</b>	<b>121,343</b>	<b>195,506</b>	<b>207,431</b>	<b>219,049</b>	<b>231,965</b>
			[061] PAMULANG (<-[160] 92)											
			[001] PONDOK BENDA	255				4,426	6,161	6,210	14,241	15,110	15,956	16,896
			[002] BENDA BARU	487				3,571	5,103	5,142	16,422	17,424	18,400	19,485
			[003] PAMULANG BARAT	407				8,438	8,944	9,146	24,933	26,454	27,935	29,584
			[004] PAMULANG TIMUR	297				5,413	5,297	5,320	11,569	12,275	12,962	13,727
			[005] PONDOK CABE UDIK	621				5,831	5,804	5,808	10,113	10,730	11,331	11,999
			[006] PONDOK CABE ILIR	303				9,207	9,355	9,364	13,501	14,325	15,127	16,018
			[007] BAMBU APUS	228				5,721	5,694	5,727	7,087	7,519	7,940	8,409
			[008] KEDAUNG	164				13,901	13,970	13,983	25,391	26,940	28,449	30,126
			<b>Total</b>	<b>2,762</b>	<b>43,413</b>	<b>51,036</b>	<b>55,829</b>	<b>56,508</b>	<b>60,328</b>	<b>60,700</b>	<b>123,257</b>	<b>130,777</b>	<b>138,100</b>	<b>146,244</b>
			[070] PONDOK AREN											
			[001] PERIGI	483				5,527	5,526	5,521	6,806	7,221	7,626	8,074
			[002] PERIGI BARU	300				4,150	4,162	4,171	4,801	5,094	5,379	5,696
			[003] PONDOK KACANG BARAT	221				3,594	3,632	3,643	4,542	4,819	5,089	5,389
			[004] PONDOK KACANG TIMUR	252				4,551	4,654	4,721	11,012	11,684	12,338	13,066
			[005] PONDOK PUCUNG	288				7,295	7,328	7,339	10,415	11,050	11,669	12,357
			[006] PONDOK AREN (+[01] PONDOK JAY)	489				7,099	7,179	7,274	13,385	14,202	14,997	15,882
			[007] JURANG MANGGU BARAT	224				6,688	6,795	6,917	14,940	15,851	16,739	17,726
			[008] JURANG MANGGU TIMUR	173				5,635	5,659	5,676	12,816	13,598	14,360	15,206
			[009] PONDOK KARYA	211				6,800	8,053	8,205	13,241	14,049	14,835	15,709
			[010] PONDOK BETUNG	294				12,464	12,636	12,698	21,071	22,356	23,608	25,000
			<b>Total</b>	<b>2,936</b>	<b>46,938</b>	<b>56,039</b>	<b>60,268</b>	<b>63,803</b>	<b>65,624</b>	<b>66,165</b>	<b>113,029</b>	<b>119,924</b>	<b>126,640</b>	<b>134,105</b>
			[160] TELUKNAGA											
			[002] BOJONG RENGED	178				4,191	4,207	4,225	5,081	5,391	5,693	6,029
			[004] KEBON CAU	146				4,745	4,758	4,756	5,673	6,019	6,356	6,731
			[005] TELUK NAGA	261				6,691	6,206	6,208	7,142	7,578	8,002	8,474
			[006] BABAKAN ASEM	179				3,551	3,552	3,558	4,107	4,358	4,601	4,872
			[015] KAMPUNG MELAYU TIMUR	217				6,956	6,933	6,966	8,422	8,935	9,436	9,992
			[016] KAMPUNG MELAYU BARAT	127				6,081	6,063	6,091	7,188	7,626	8,053	8,526
			[017] KAMPUNG BESAR	346				5,818	5,813	5,801	6,178	6,554	6,922	7,300
			[018] LEMO	388				3,814	3,817	3,825	4,166	4,420	4,668	4,944
			[019] TEGAL ANGUS	343				5,311	5,310	5,315	6,105	6,478	6,840	7,283



## 2-16 PAST POPULATION RECORD BY KELURAHAN (1984 - 1993)

Propinsi	Kecamatan	Kabupaten	Kelurahan	Area 1993 (ha)	Population											
					1983	1984	1985	1986	1987	1988	1989	1990 (CENSUS)	1991	1992	1993	
			[002] KUNCIRAN	529						10,104	11,029	11,413	22,063	23,409	24,720	28,219
			[003] PINANG	609						11,702	12,583	12,697	22,265	23,623	24,946	28,477
			[004] GONDONG	366						10,055	10,087	10,089	12,062	12,798	13,514	15,428
			[005] PETIR	288						10,806	10,857	10,869	13,652	14,485	15,296	17,461
			[006] CIPONDOH	434						13,983	14,229	14,441	26,083	27,674	29,224	33,361
			[007] CIPETE	509						7,354	7,348	7,345	7,928	8,411	8,883	10,141
			[008] PORIS PLAWAD	539						13,719	14,039	14,053	20,809	22,079	23,315	26,615
			<b>Total</b>	<b>3,970</b>	<b>71,775</b>	<b>73,350</b>	<b>90,778</b>	<b>90,079</b>	<b>92,894</b>	<b>93,682</b>	<b>140,767</b>	<b>149,354</b>	<b>157,718</b>	<b>180,045</b>		
			[050] BATU CEPER													
			[001] NEGLASARI	344						14,167	14,296	14,314	17,841	18,930	19,989	20,722
			[002] KEDAUNG WETAN	318						7,967	8,035	8,042	11,000	11,670	12,325	12,776
			[003] SELA PAJANG JAYA	167						8,840	9,761	9,785	11,857	12,580	13,285	13,772
			[004] KARANG SARI	545						12,489	12,504	12,513	23,866	25,311	26,729	27,709
			[005] BATU JAYA	322						9,260	11,258	11,276	15,317	16,251	17,161	17,791
			[006] BATU CEPER	338						12,272	16,398	16,426	22,958	24,359	25,722	26,664
			[007] PORIS GAGA BARU	132						5,737	7,555	7,578	11,023	11,695	12,350	12,803
			[008] PORIS GAGA	197						5,782	7,674	7,698	11,060	11,735	12,392	12,845
			<b>Total</b>	<b>2,364</b>	<b>71,742</b>	<b>73,198</b>	<b>74,893</b>	<b>76,514</b>	<b>87,481</b>	<b>87,632</b>	<b>124,912</b>	<b>132,531</b>	<b>139,953</b>	<b>145,082</b>		
			[060] BENDA (<-[050]*93)													
			[001] BELENDUNG	157						8,011	8,234	8,241	9,133	9,690	10,233	10,594
			[002] JURU MUDI BARU	220						4,571	5,311	5,322	9,747	10,341	10,921	11,307
			[003] JURU MUDI	234						4,690	4,829	4,834	8,800	9,337	9,860	10,208
			[005] BENDA	434						5,917	5,940	5,959	8,952	9,499	10,030	10,384
			[004] PAJANG	81						1,622	1,676	1,715	1,443	1,531	1,617	1,674
			<b>Total</b>	<b>1,126</b>	<b>23,263</b>	<b>23,736</b>	<b>24,285</b>	<b>24,811</b>	<b>25,990</b>	<b>26,071</b>	<b>38,075</b>	<b>40,398</b>	<b>42,661</b>	<b>44,167</b>		
			Kotamadya TANGERANG-Total	10,009	255,621	265,560	288,824	297,561	314,078	316,408	494,866	525,053	554,625	623,720		
			JAWA BARAT-Total	54,889	995,189	1,055,244	1,150,826	1,209,114	1,260,817	1,295,537	1,963,746	2,024,023	2,094,695	2,219,517		
			<b>Grand Total</b>	<b>121,015</b>	<b>7,198,380</b>	<b>7,384,435</b>	<b>7,623,318</b>	<b>7,970,024</b>	<b>8,125,479</b>	<b>8,298,804</b>	<b>10,186,261</b>	<b>9,230,876</b>	<b>9,404,429</b>	<b>9,614,515</b>		

SOURCE : STATISTIC WILAYAH DKI JAKARTA : KANTOR STATISTIC PROPINSI DKI JAKARTA  
 CENSUS / PUNDUK DKI JAKARTA (HASIL SENSUS PENDUDUK 1990) : KANTOR STATISTIC PROPINSI DKI JAKARTA  
 BADAN PERENCANAAN DAERAH KABUPATEN  
 Partly projected

## 3 POPULATION FORECAST BY 5 STATISTICAL EQUATION, FOR DKI JAKARTA

&lt;&lt; Projection of population in D.K.I.Jakarta by trend &gt;&gt;

Arithmetic increase  $Y = 136 * X + 6,117$ Giometric increase  $Y = 6,140 * (1 + 0.02018)^X$ Exponential curve  $Y = 15,000 - 8,905 * 0.98349^X$ Power curve  $Y = 6,056 * X^{0.08190}$ Logistic curve  $Y = 15,000 / (1 + \text{EXP}(0.37172 - 0.03663 * X))$  x 1,000

Year	X	Data	Arithmetic	Giometric	Exponential	Power	Logistic
1984	1	6,203	6,253	6,264	6,242	6,056	6,255
1985	2	6,329	6,389	6,390	6,387	6,410	6,389
1986	3	6,472	6,525	6,519	6,529	6,626	6,524
1987	4	6,761	6,661	6,651	6,669	6,784	6,659
1988	5	6,865	6,797	6,785	6,807	6,909	6,795
1989	6	7,003	6,933	6,922	6,942	7,013	6,931
1990	7	7,105	7,069	7,062	7,075	7,102	7,068
1991	8	7,207	7,205	7,205	7,206	7,180	7,205
1992	9	7,310	7,341	7,350	7,334	7,250	7,342
1993	10	7,395	7,477	7,498	7,461	7,313	7,480
1994	11		7,613	7,650	7,585	7,370	7,617
1995	12		7,749	7,804	7,708	7,423	7,754
1996	13		7,885	7,962	7,828	7,472	7,891
1997	14		8,021	8,122	7,947	7,517	8,028
1998	15		8,157	8,286	8,063	7,560	8,165
1999	16		8,293	8,453	8,178	7,600	8,301
2000	17		8,429	8,624	8,290	7,638	8,436
2001	18		8,565	8,798	8,401	7,673	8,571
2002	19		8,701	8,976	8,510	7,707	8,705
2003	20		8,837	9,157	8,617	7,740	8,839
2004	21		8,973	9,342	8,722	7,771	8,971
2005	22		9,109	9,530	8,826	7,801	9,103
2006	23		9,245	9,723	8,928	7,829	9,233
2007	24		9,381	9,919	9,028	7,856	9,363
2008	25		9,517	10,119	9,127	7,883	9,491
2009	26		9,653	10,323	9,224	7,908	9,618
2010	27		9,789	10,532	9,319	7,933	9,744
2011	28		9,925	10,744	9,413	7,956	9,868
2012	29		10,061	10,961	9,505	7,979	9,991
2013	30		10,197	11,182	9,596	8,001	10,113
2014	31		10,333	11,408	9,685	8,023	10,233
2015	32		10,469	11,638	9,773	8,044	10,351
2016	33		10,605	11,873	9,859	8,064	10,468
2017	34		10,741	12,113	9,944	8,084	10,583
2018	35		10,877	12,357	10,027	8,103	10,696
2019	36		11,013	12,607	10,109	8,122	10,808
Average dev. of err			68	78	61	91	70
Coeff. of corelation			0.988	0.984	0.990	0.979	0.987

#### 4 POPULATION FORECAST BY EXPONENTIAL CURVE, FOR DKI JAKARTA

<< Projection of population in D.K.I.Jakarta by Exponential curve >>

Exponential curve  $Y = 15,000 - 8,905 * 0.98349 ^X$

Year	X	Data	Y	Residual	Residual^2	Lower Conf.	Upper Conf.
1984	1	6,203	6,242	-39	1,559	6,113	6,370
1985	2	6,329	6,387	-58	3,370	6,279	6,494
1986	3	6,472	6,529	-57	3,276	6,440	6,617
1987	4	6,761	6,669	92	8,450	6,595	6,743
1988	5	6,865	6,807	58	3,410	6,741	6,872
1989	6	7,003	6,942	61	3,738	6,877	7,006
1990	7	7,105	7,075	30	907	7,004	7,145
1991	8	7,207	7,206	1	2	7,124	7,287
1992	9	7,310	7,334	-24	595	7,238	7,429
1993	10	7,395	7,461	-66	4,347	7,349	7,571
1994	11		7,585		29,654	7,458	7,711
1995	12		7,708			7,564	7,849
1996	13		7,828			7,668	7,985
1997	14		7,947			7,770	8,118
1998	15		8,063			7,871	8,250
1999	16		8,178			7,970	8,379
2000	17		8,290			8,068	8,505
2001	18		8,401			8,164	8,630
2002	19		8,510			8,259	8,752
2003	20		8,617			8,352	8,871
2004	21		8,722			8,444	8,989
2005	22		8,826			8,535	9,104
2006	23		8,928			8,624	9,217
2007	24		9,028			8,713	9,328
2008	25		9,127			8,800	9,437
2009	26		9,224			8,885	9,543
2010	27		9,319			8,970	9,648
2011	28		9,413			9,053	9,751
2012	29		9,505			9,135	9,851
2013	30		9,596			9,216	9,950
2014	31		9,685			9,296	10,047
2015	32		9,773			9,375	10,142
2016	33		9,859			9,453	10,235
2017	34		9,944			9,530	10,327
2018	35		10,027			9,605	10,417
2019	36		10,109			9,680	10,505
Average dev. of err				61			
Coeff. of correlation				0.990			

**5 COMPARISON OF FORECAST AND CENSUS RECORD, FOR DKI JAKARTA**

&lt;&lt; Projection of population in D.KI.Jakarta by Exponential curve &amp; CENSUS &gt;&gt;

Exponential curve

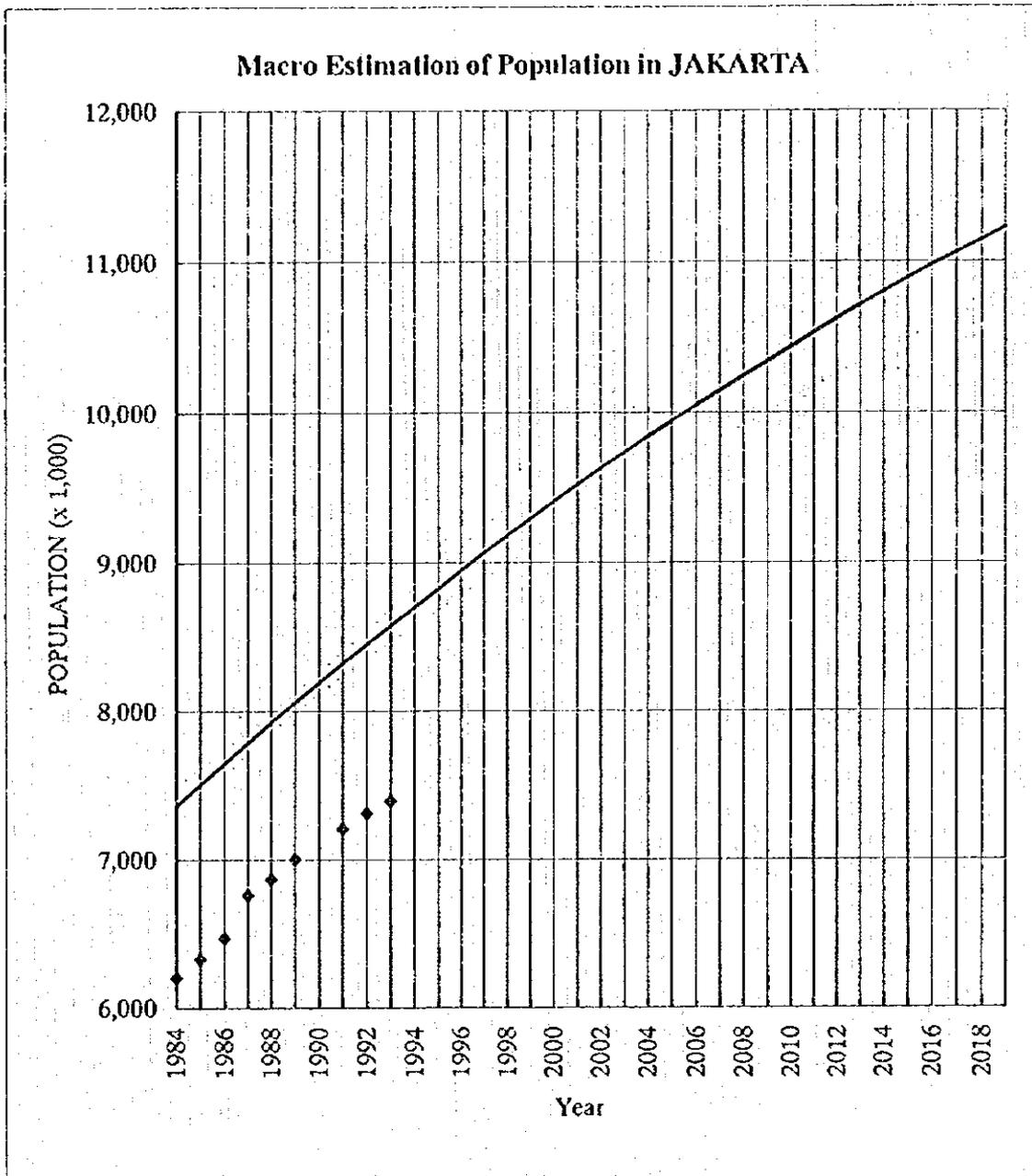
$$Y = 15,000 - 8,905 * 0.98349 ^{(Year-1983)} + 1,118$$

Confidential interval : 99%

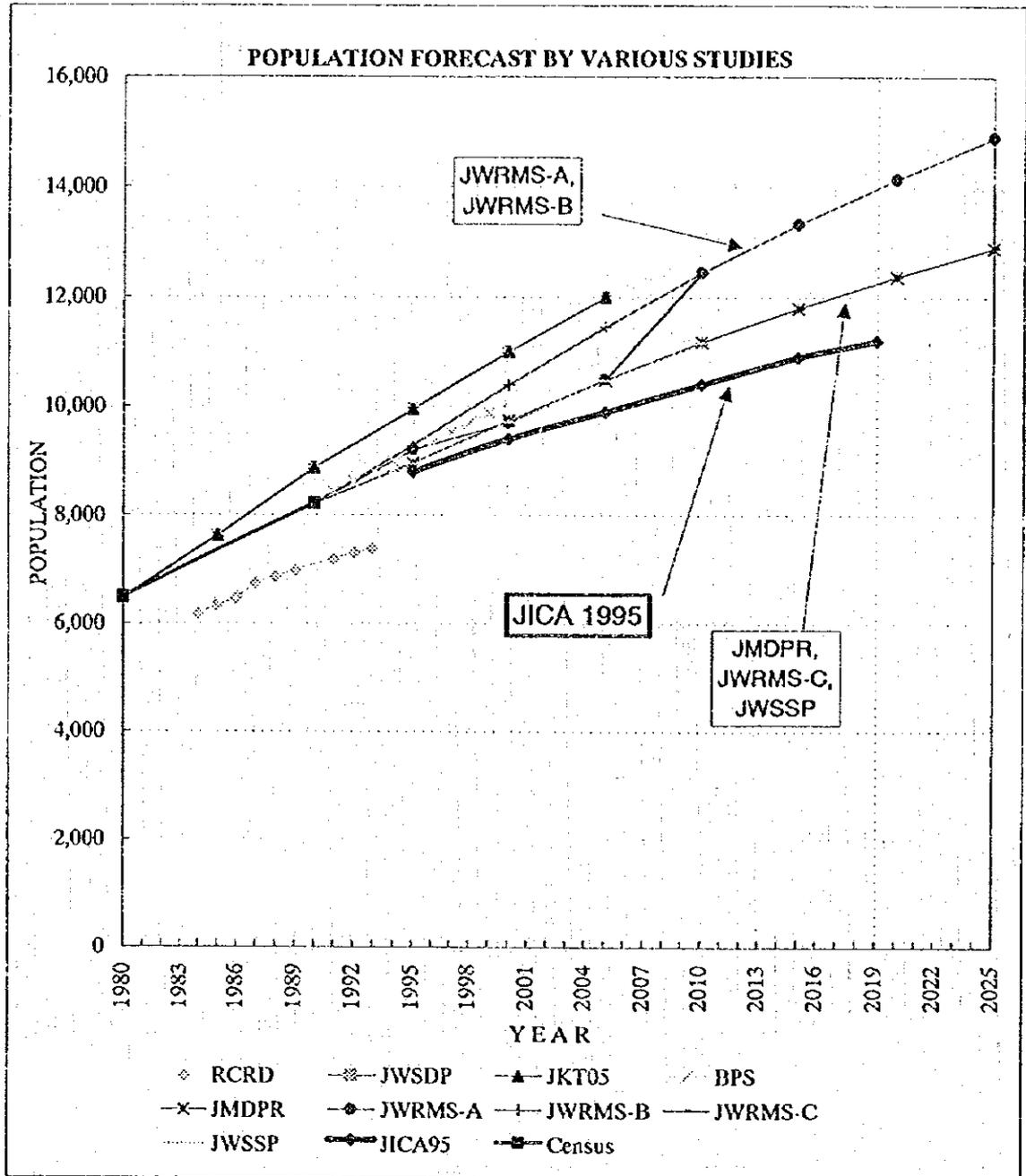
Year	Census	Record	Calculated	Lower Conf.	Upper Conf.	Projected
1971	4567					
1972						
1973						
1974						
1975						
1976						
1977						
1978						
1979						
1980	6503					
1981						
1982						
1983						
1984		6203	7,360	7,231	7,488	
1985		6329	7,505	7,397	7,612	
1986		6472	7,647	7,558	7,735	
1987		6761	7,787	7,713	7,861	
1988		6865	7,925	7,859	7,990	
1989		7003	8,060	7,995	8,124	
1990	8223		8,193	8,122	8,263	
1991		7207	8,324	8,242	8,405	
1992		7310	8,452	8,356	8,547	
1993		7395	8,579	8,467	8,689	
1994			8,703	8,576	8,829	
1995			8,826	8,682	8,967	8,800
1996			8,946	8,786	9,103	
1997			9,065	8,888	9,236	
1998			9,181	8,989	9,368	
1999			9,296	9,088	9,497	
2000			9,408	9,186	9,623	9,400
2001			9,519	9,282	9,748	
2002			9,628	9,377	9,870	
2003			9,735	9,470	9,989	
2004			9,840	9,562	10,107	
2005			9,944	9,653	10,222	9,900
2006			10,046	9,742	10,335	
2007			10,146	9,831	10,446	
2008			10,245	9,918	10,555	
2009			10,342	10,003	10,661	
2010			10,437	10,088	10,766	10,400
2011			10,531	10,171	10,869	
2012			10,623	10,253	10,969	
2013			10,714	10,334	11,068	
2014			10,803	10,414	11,165	
2015			10,891	10,493	11,260	10,900
2016			10,977	10,571	11,353	
2017			11,062	10,648	11,445	
2018			11,145	10,723	11,535	
2019			11,227	10,798	11,623	11,200

x 1,000

6 FIGURE OF POPULATION FORECAST, FOR DKI JAKARTA



7 FIGURE OF POPULATION FORECAST BY VARIOUS STUDIES



## 8 POPULATION FORECAST BY 5 STATISTICAL EQUATION, FOR FRINGE AREA

&lt;&lt; Projection of population in Botabek by trend &gt;&gt;

Arithmetic increase	$Y = 84 * X + 1,866$
Giometric increase	$Y = 1,875 * (1 + 0.04102)^X$
Exponential curve	$Y = 7,000 - 5,138 * 0.98306^X$
Power curve	$Y = 1,943 * X^{0.08217}$
Logistic curve	$Y = 7,000 / (1 + \text{EXP}(1.00794 - 0.05729 * X))$

Year	X	Data	Arithmetic	Giometric	Exponential	Power	Logistic
1984							
1985							
1986							
1987							
1988							
1989							
1990	1	1,964	1,950	1,952	1,949	1,943	1,951
1991	2	2,024	2,034	2,032	2,034	2,056	2,033
1992	3	2,095	2,118	2,116	2,119	2,126	2,117
1993	4	2,220	2,202	2,202	2,201	2,177	2,202
1994	5		2,286	2,293	2,283	2,217	2,289
1995	6		2,369	2,387	2,363	2,251	2,379
1996	7		2,453	2,485	2,441	2,279	2,469
1997	8		2,537	2,587	2,518	2,305	2,562
1998	9		2,621	2,693	2,594	2,327	2,655
1999	10		2,705	2,803	2,669	2,347	2,751
2000	11		2,789	2,918	2,742	2,366	2,847
2001	12		2,873	3,038	2,814	2,383	2,944
2002	13		2,957	3,163	2,885	2,398	3,042
2003	14		3,041	3,292	2,955	2,413	3,141
2004	15		3,125	3,428	3,024	2,427	3,241
2005	16		3,208	3,568	3,091	2,440	3,340
2006	17		3,292	3,715	3,157	2,452	3,441
2007	18		3,376	3,867	3,222	2,463	3,541
2008	19		3,460	4,026	3,286	2,474	3,641
2009	20		3,544	4,191	3,349	2,485	3,741
2010	21		3,628	4,363	3,411	2,495	3,841
2011	22		3,712	4,542	3,472	2,504	3,940
2012	23		3,796	4,728	3,532	2,513	4,038
2013	24		3,880	4,922	3,590	2,522	4,135
2014	25		3,964	5,124	3,648	2,531	4,232
2015	26		4,047	5,334	3,705	2,539	4,327
2016	27		4,131	5,553	3,761	2,547	4,421
2017	28		4,215	5,781	3,816	2,554	4,514
2018	29		4,299	6,018	3,870	2,562	4,605
2019	30		4,383	6,265	3,923	2,569	4,694
Average dev. of err			24	22	25	47	23
Coeff. of corelation			0.984	0.987	0.983	0.939	0.986

## 9 POPULATION FORECAST BY LOGISTIC CURVE, FOR FRINGE AREA

&lt;&lt; Projection of population in Botabek by Logistic curve from CENSUS &gt;&gt;

Logistic curve  $Y = 7,000 / (1 + \text{EXP}(1.00794 - 0.05729 * X))$

Confidential interval : 95%

Year	Data	Calculated	Lower Conf.	Upper Conf.	Projected
1984	995				
1985	1055				
1986	1151				
1987	1209				
1988	1261				
1989	1296				
1990	1,964	1,951	1,874	2,030	
1991	2,024	2,033	1,981	2,086	
1992	2,095	2,117	2,063	2,171	
1993	2,220	2,202	2,119	2,287	
1994		2,289	2,166	2,416	
1995		2,379	2,211	2,552	2,300
1996		2,469	2,255	2,693	
1997		2,562	2,298	2,837	
1998		2,655	2,342	2,984	
1999		2,751	2,386	3,133	
2000		2,847	2,430	3,284	2,800
2001		2,944	2,474	3,435	
2002		3,042	2,519	3,587	
2003		3,141	2,564	3,739	
2004		3,241	2,609	3,889	
2005		3,340	2,655	4,038	3,300
2006		3,441	2,701	4,186	
2007		3,541	2,747	4,331	
2008		3,641	2,793	4,472	
2009		3,741	2,840	4,611	
2010		3,841	2,887	4,746	3,800
2011		3,940	2,934	4,876	
2012		4,038	2,981	5,003	
2013		4,135	3,029	5,124	
2014		4,232	3,077	5,241	
2015		4,327	3,125	5,353	4,300
2016		4,421	3,173	5,460	
2017		4,514	3,221	5,562	
2018		4,605	3,269	5,659	
2019		4,694	3,317	5,750	4,600

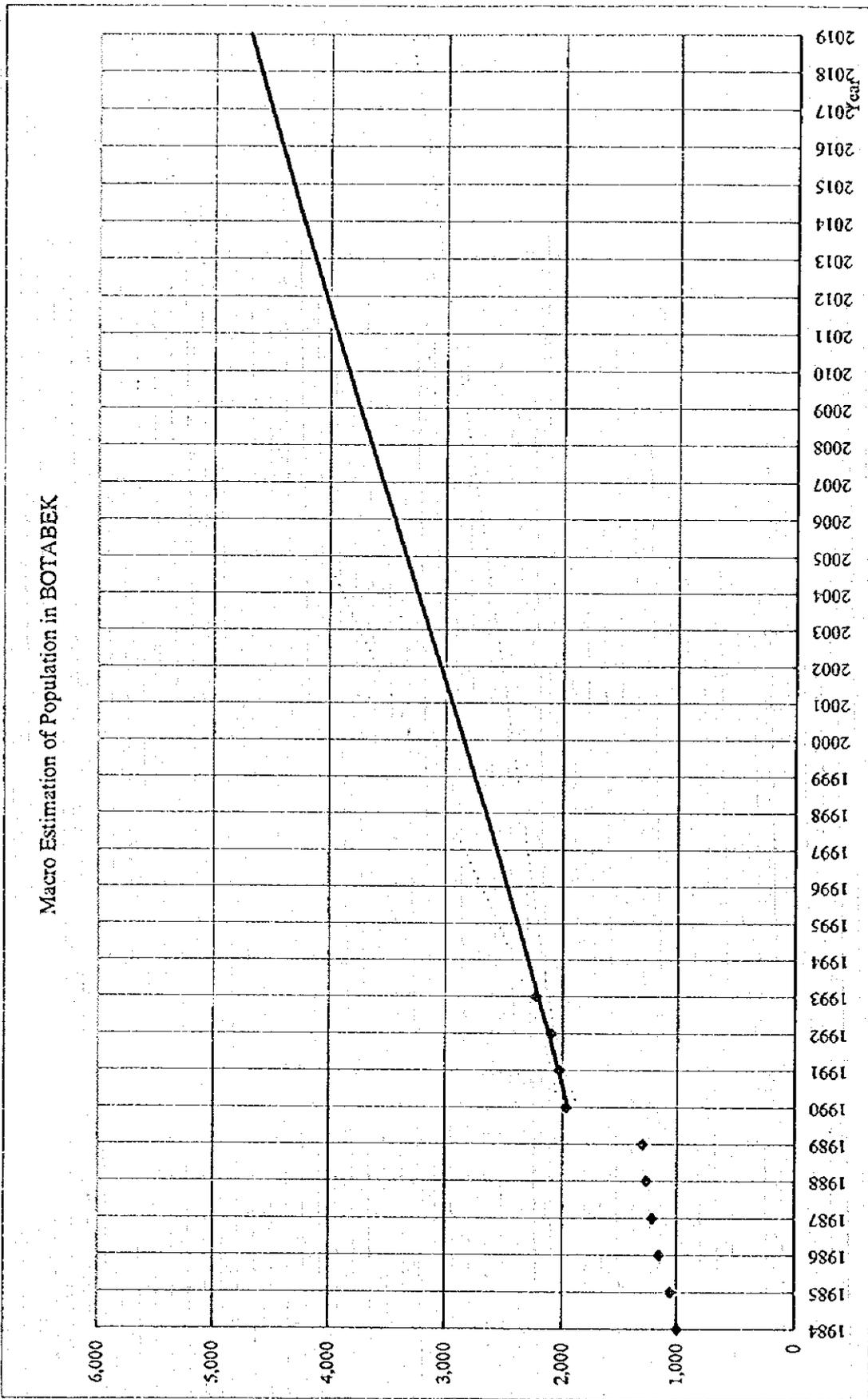
## &lt;&lt; Projection of population in Botabek by Logistic curve &gt;&gt;

Logistic curve  $Y = 7,000 / (1 + \text{EXP}(1.00794 - 0.05729 * X))$ 

Year	X	Data	Y	Residual	Residual^2	Lower Conf.	Upper Conf.
1984							
1985							
1986							
1987							
1988							
1989							
1990	1	1,964	1,951	13	162	1,874	2,030
1991	2	2,024	2,033	-9	80	1,981	2,086
1992	3	2,095	2,117	-22	465	2,063	2,171
1993	4	2,220	2,202	18	320	2,119	2,287
1994	5		2,289		1,027	2,166	2,416
1995	6		2,379			2,211	2,552
1996	7		2,469			2,255	2,693
1997	8		2,562			2,298	2,837
1998	9		2,655			2,342	2,984
1999	10		2,751			2,386	3,133
2000	11		2,847			2,430	3,284
2001	12		2,944			2,474	3,435
2002	13		3,042			2,519	3,587
2003	14		3,141			2,564	3,739
2004	15		3,241			2,609	3,889
2005	16		3,340			2,655	4,038
2006	17		3,441			2,701	4,186
2007	18		3,541			2,747	4,331
2008	19		3,641			2,793	4,472
2009	20		3,741			2,840	4,611
2010	21		3,841			2,887	4,746
2011	22		3,940			2,934	4,876
2012	23		4,038			2,981	5,003
2013	24		4,135			3,029	5,124
2014	25		4,232			3,077	5,241
2015	26		4,327			3,125	5,353
2016	27		4,421			3,173	5,460
2017	28		4,514			3,221	5,562
2018	29		4,605			3,269	5,659
2019	30		4,694			3,317	5,750
Average dev. of err				61			
Coeff. of correlation				0.990			

Graph

10 FIGURE OF POPULATION FORECAST, FOR DKI JAKARTA



## II-1 FUTURE POPULATION BY KABUPATEN OR KOTAMADYA, 1990 - 2019

Propinsi	Kabupaten /Kotamadya	1990					1995					2000					2005					
		Area (ha)	Population	Density /ha	Population Growth Rate %/yr	Population *1000	Area (ha)	Population	Density /ha	Population Growth Rate %/yr	Population *1000	Area (ha)	Population	Density /ha	Population Growth Rate %/yr	Population *1000	Area (ha)	Population	Density /ha	Population Growth Rate %/yr	Population *1000	
[31]	D.K.I.JAKARTA	66,126	8,222,515	124	1.4%	8,800	133	1.4%	9,400	142	1.4%	9,900	150	1.1%	9,900	142	1.4%	9,900	150	1.1%	9,900	150
[71]	JAKARTA SELATAN	14,537	1,905,004	131	1.4%	2,030	140	1.3%	2,150	148	1.2%	2,260	155	1.0%	2,260	148	1.2%	2,260	155	1.0%	2,260	155
[72]	JAKARTA TIMUR	18,773	2,064,495	110	3.0%	2,360	126	2.9%	2,690	143	2.8%	2,940	157	1.9%	2,940	143	2.8%	2,940	157	1.9%	2,940	157
[73]	JAKARTA PUSAT	4,790	1,074,752	224	-0.3%	1,020	213	-1.0%	1,000	209	-0.4%	980	205	-0.4%	980	209	-0.4%	980	205	-0.4%	980	205
[74]	JAKARTA BARAT	12,615	1,815,316	144	1.5%	1,950	155	1.5%	2,050	163	1.0%	2,140	170	0.9%	2,140	163	1.0%	2,140	170	0.9%	2,140	170
[75]	JAKARTA UTARA	15,411	1,362,948	88	4.2%	1,440	93	1.1%	1,510	98	1.0%	1,580	103	0.9%	1,580	98	1.0%	1,580	103	0.9%	1,580	103
[32]	JAWA BARAT	54,889	1,963,746	36	4.3%	2,300	42	3.4%	2,800	51	4.3%	3,300	60	3.6%	3,300	51	4.3%	3,300	60	3.6%	3,300	60
[03]	BOGOR	13,864	418,277	30	1.4%	430	31	0.6%	460	33	1.4%	490	35	1.3%	490	33	1.4%	490	35	1.3%	490	35
[18]	BEKASI	14,706	484,135	33	0.3%	490	33	0.2%	500	34	0.4%	510	35	0.4%	510	34	0.4%	510	35	0.4%	510	35
[19]	TANGERANG	16,310	566,468	35	6.2%	700	43	4.7%	900	55	5.7%	1,080	66	4.0%	1,080	55	5.7%	1,080	66	4.0%	1,080	66
[75]	Kotamadya TANGERANG	10,009	494,866	49	8.7%	680	68	7.5%	940	94	7.6%	1,220	122	6.0%	1,220	94	7.6%	1,220	122	6.0%	1,220	122
Investigation Area Total		121,015	10,186,261	84	-1.9%	11,100	92	1.8%	12,200	101	2.0%	13,200	109	1.6%	13,200	101	2.0%	13,200	109	1.6%	13,200	109



## 12-1 FUTURE POPULATION BY KECAMATAN, 1990 - 2019

Propinsi	Kecamatan	Kecamatan	Population Growth Rate					1990			1995			2000			2005		
			1993	84-93	85-89	90-93	90-93	Population	Density	Population	Rate	Density	Population	Rate	Density	Population	Rate	Density	
		Area	%/yr	%/yr	%/yr	%/yr	(ha)	/ha	%/yr	*1000	/ha	%/yr	*1000	/ha	%/yr	*1000	/ha	%/yr	
[31] D.K.I.	JAKARTA		66,126	2.1%	2.7%	1.4%	8,222,515	124	8,800	1.4%	133	9,400	1.4%	142	9,900	1.1%	150	1.5%	
1	[71] JAKARTA SELATAN		14,537	4.0%	4.4%	1.4%	1,905,004	131	2,030	1.3%	140	2,150	1.2%	148	2,260	1.0%	155	1.0%	
2	[010] KEBAYORAN LAMA		1,931	4.0%	7.4%	1.9%	299,442	155	310	0.7%	161	320	0.6%	166	325	0.3%	168	0.3%	
3	[011] PESANGGKAHAN		1,347	9.4%	10.2%	5.7%	153,715	114	175	2.8%	130	195	2.3%	145	215	2.1%	160	2.1%	
4	[020] CILANDAK		1,820	6.9%	8.6%	3.9%	172,036	95	190	2.1%	104	210	2.1%	115	230	1.9%	126	1.9%	
5	[030] PASAR MINGGU		2,191	7.7%	10.4%	3.6%	231,848	106	270	3.3%	123	300	2.2%	137	325	1.7%	148	1.7%	
6	[031] JAGAKARSA		2,502	7.6%	5.4%	6.9%	143,072	57	190	6.6%	76	235	4.7%	94	275	3.4%	110	3.4%	
7	[040] MAMPANG PRAPATAN		774	2.3%	3.4%	1.3%	148,665	192	155	0.9%	200	155	0.0%	200	155	0.0%	200	0.0%	
8	[041] PANGORAN		823	4.3%	5.0%	2.8%	141,373	172	155	1.9%	188	160	0.6%	194	165	0.6%	200	0.6%	
9	[050] KEBAYORAN BARU		1,291	-0.7%	-1.1%	-0.6%	186,865	145	185	-0.2%	143	185	0.0%	143	185	0.0%	143	0.0%	
10	[060] SETIA BUDI		905	-2.5%	0.3%	-5.9%	179,495	198	150	-3.3%	166	140	-1.3%	155	140	0.0%	155	0.0%	
11	[070] TEBET		953	1.7%	2.8%	0.7%	248,493	261	250	0.1%	262	250	0.0%	262	245	-0.4%	257	-0.4%	
12	[72] JAKARTA TIMUR		18,773	3.7%	3.4%	3.0%	2,064,495	110	2,360	2.9%	126	2,690	2.8%	143	2,940	1.9%	157	1.9%	
13	[010] PASAR REBO		1,294	7.2%	7.1%	5.1%	119,517	92	145	4.3%	112	175	4.1%	135	200	2.9%	155	2.9%	
14	[011] CIRACAS		1,608	9.2%	9.8%	4.2%	157,704	98	190	4.1%	118	230	4.2%	143	260	2.6%	162	2.6%	
15	[012] CIPAYUNG		2,735	9.1%	7.4%	7.4%	100,860	37	140	7.8%	51	190	7.1%	69	240	5.3%	88	5.3%	
16	[020] KRAMAT JATI		1,334	2.8%	2.8%	2.4%	211,757	159	230	1.7%	172	250	1.7%	187	250	0.0%	187	0.0%	
17	[021] MAKASAR		2,164	3.2%	3.1%	3.2%	146,532	68	170	3.2%	79	200	3.5%	92	225	2.5%	104	2.5%	
18	[030] JATINEGARA		1,064	1.1%	0.9%	1.1%	277,578	261	290	0.9%	273	300	0.7%	282	295	-0.3%	277	-0.3%	
19	[031] DUREN SAWIT		2,281	5.8%	5.5%	3.8%	290,246	127	340	3.4%	149	390	2.9%	171	420	1.5%	184	1.5%	
20	[040] MATRAMAN		485	0.5%	-0.3%	1.2%	165,372	341	160	-0.6%	330	155	-0.6%	320	145	-1.3%	299	-1.3%	
21	[050] PULO GADUNG		1,561	2.0%	1.8%	1.2%	279,103	179	295	1.1%	189	300	0.3%	192	305	0.3%	195	0.3%	
22	[060] CAKUNG		4,247	7.3%	5.7%	6.5%	315,826	74	400	5.3%	94	500	5.0%	118	600	4.0%	141	4.0%	
23	[73] JAKARTA PUSAT		4,790	-0.7%	-0.3%	-1.0%	1,074,752	224	1,020	-1.0%	213	1,000	-0.4%	209	980	-0.4%	205	-0.4%	
24	[010] TANAH ABANG		930	-2.2%	-0.7%	-4.2%	192,152	207	170	-2.3%	183	170	0.0%	183	170	0.0%	183	0.0%	
25	[020] MENTENG		653	0.0%	0.0%	-0.3%	90,774	139	90	-0.2%	138	90	0.0%	138	90	0.0%	138	0.0%	
26	[030] SENEN		423	-0.7%	-0.9%	-0.5%	112,589	266	105	-1.3%	248	100	-1.0%	236	95	-1.0%	225	-1.0%	
27	[040] CEMPAKA PUTIH		469	0.8%	0.9%	0.6%	92,497	197	95	0.5%	203	90	-1.1%	192	90	0.0%	192	0.0%	
28	[041] JOHAR BARU		238	-0.5%	-1.4%	0.5%	122,866	516	105	-2.9%	441	100	-1.0%	420	90	-2.0%	378	-2.0%	
29	[050] KEMAYORAN		725	0.2%	0.7%	0.7%	236,528	312	230	0.3%	317	225	-0.4%	310	220	-0.4%	303	-0.4%	
30	[060] SAWAH BESAR		592	-0.9%	-0.2%	-1.4%	124,482	210	120	-0.7%	203	120	0.0%	203	120	0.0%	203	0.0%	
31	[070] GAMBIR		760	-1.1%	-0.7%	-1.3%	112,864	149	105	-1.4%	138	105	0.0%	138	105	0.0%	138	0.0%	
32	[74] JAKARTA BARAT		12,615	1.6%	1.5%	1.5%	1,815,316	144	1,980	1.5%	155	2,050	1.0%	163	2,140	0.9%	170	0.9%	

## Kecamatan

## 12-2 FUTURE POPULATION BY KECAMATAN, 1990 - 2019

Propinsi	Kecamatan	2010			2015			2019		
		Population *1000	Rate %/yr	Density /ha	Population *1000	Rate %/yr	Density /ha	Population *1000	Rate %/yr	Density /ha
[31] D.K.I.JAKARTA		10,400	1.0%	157	10,900	1.0%	165	11,200	0.7%	169
	[71] JAKARTA SELATAN	2,360	0.9%	162	2,470	0.9%	170	2,560	0.9%	176
1	[010] KEBAYORAN LAMA	330	0.3%	171	335	0.3%	173	340	0.4%	176
2	[011] PESANGGRAHAN	230	1.4%	171	245	1.3%	182	255	1.0%	189
3	[020] CILANDAK	250	1.7%	137	280	2.4%	154	305	2.2%	168
4	[030] PASAR MINGGU	345	1.2%	157	360	0.9%	164	375	1.0%	171
5	[031] JAGAKARSA	320	3.3%	128	375	3.4%	150	415	2.7%	166
6	[040] MAMPANG PRAPATAN	155	0.0%	200	150	-0.6%	194	145	-0.8%	187
7	[041] PANCORAN	165	0.0%	200	160	-0.6%	194	155	-0.8%	188
8	[050] KEBAYORAN BARU	185	0.0%	143	190	0.5%	147	195	0.7%	151
9	[060] SETIA BUDI	140	0.0%	155	140	0.0%	155	145	0.9%	160
10	[070] TEBET	240	-0.4%	252	235	-0.4%	247	230	-0.5%	241
	[72] JAKARTA TIMUR	3,190	1.7%	170	3,430	1.5%	183	3,550	0.9%	189
11	[010] PASAR REBO	220	2.0%	170	240	1.8%	185	260	2.1%	201
12	[011] CIRACAS	290	2.3%	180	310	1.4%	193	320	0.8%	199
13	[012] CIPAYUNG	300	5.0%	110	380	5.3%	139	430	3.3%	157
14	[020] KRAMAT JATI	250	0.0%	187	255	0.4%	191	260	0.5%	195
15	[021] MAKASAR	250	2.2%	116	275	2.0%	127	290	1.4%	134
16	[030] JATINEGARA	290	-0.3%	273	285	-0.3%	268	280	-0.4%	263
17	[031] DUREN SAWIT	440	1.0%	193	455	0.7%	199	460	0.3%	202
18	[040] MATRAMAN	140	-0.7%	289	135	-0.7%	278	130	-0.9%	268
19	[050] PULO GADUNG	310	0.3%	199	315	0.3%	202	320	0.4%	205
20	[060] CAKUNG	700	3.3%	165	780	2.3%	184	800	0.6%	188
	[73] JAKARTA PUSAT	970	-0.2%	203	960	-0.2%	200	950	-0.3%	198
21	[010] TANAH ABANG	170	0.0%	183	170	0.0%	183	170	0.0%	183
22	[020] MENTENG	90	0.0%	138	90	0.0%	138	90	0.0%	138
23	[030] SENEN	95	0.0%	225	95	0.0%	225	95	0.0%	225
24	[040] CEMPAKA PUTIH	90	0.0%	192	90	0.0%	192	90	0.0%	192
25	[041] JOHAR BARU	85	-1.1%	357	80	-1.2%	336	75	-1.6%	315
26	[050] KEMAYORAN	215	-0.5%	297	210	-0.5%	290	205	-0.6%	283
27	[060] SAWAH BESAR	120	0.0%	203	120	0.0%	203	120	0.0%	203
28	[070] GAMBIR	105	0.0%	138	105	0.0%	138	105	0.0%	138
	[74] JAKARTA BARAT	2,230	0.8%	177	2,320	0.8%	184	2,380	0.6%	189

## 12-3 FUTURE POPULATION BY KECAMATAN, 1990 - 2019

Propinsi	Kecamatan	Kabupaten	Kotamadya	Population Growth Rate										1990			1995			2000			2005						
				1993	84-93	%/yr	85-89	%/yr	89-93	%/yr	90-93	%/yr	Population	Density	Population	Density	Population	Density	Population	Density	Population	Density	Rate	Density	Rate	Density			
29	[010]	KEBONJERUK	1,751	4.8%	6.0%	2.3%	4.4%	261,605	149	285	1.8%	163	300	1.1%	171	315	1.0%	180	315	1.0%	180	315	1.0%	180	315	1.0%			
30	[011]	KEMBANGAN	2,464	6.8%	5.6%	4.4%	4.4%	157,233	64	185	3.5%	75	215	3.2%	87	250	3.3%	101	250	3.3%	101	250	3.3%	101	250	3.3%			
31	[020]	CENKARENG	2,793	3.6%	3.0%	3.5%	3.5%	367,969	132	420	2.8%	150	465	2.1%	166	495	1.3%	177	495	1.3%	177	495	1.3%	177	495	1.3%			
32	[021]	KALI DERES	2,740	4.8%	3.2%	4.6%	4.6%	175,496	64	210	3.9%	77	240	2.9%	88	270	2.5%	99	270	2.5%	99	270	2.5%	99	270	2.5%			
33	[030]	GROGOL PETAMBURAN	1,129	-0.2%	-0.7%	0.3%	0.3%	242,015	214	240	-0.2%	213	240	0.0%	213	240	0.0%	213	240	0.0%	213	240	0.0%	213	240	0.0%	213	240	0.0%
34	[031]	PALMERAH	754	0.7%	0.9%	0.4%	0.4%	217,065	288	220	0.3%	292	215	-0.5%	285	210	-0.5%	279	210	-0.5%	279	210	-0.5%	279	210	-0.5%	279	210	-0.5%
35	[040]	TAMBORA	548	-0.1%	-0.6%	0.5%	0.5%	263,607	481	260	-0.3%	474	250	-0.8%	456	240	-0.8%	438	240	-0.8%	438	240	-0.8%	438	240	-0.8%	438	240	-0.8%
36	[050]	TAMAN SARI	436	-0.2%	0.9%	-0.4%	-0.4%	130,326	299	130	-0.1%	298	125	-0.8%	287	120	-0.8%	275	120	-0.8%	275	120	-0.8%	275	120	-0.8%	275	120	-0.8%
37	[75]	JAKARTA UTARA	15,411	2.9%	4.2%	1.2%	1.8%	1,362,948	88	1,440	1.1%	93	1,510	1.0%	98	1,580	0.9%	103	1,580	0.9%	103	1,580	0.9%	103	1,580	0.9%	103	1,580	0.9%
38	[010]	PENJARINGAN	3,548	6.1%	7.5%	1.8%	1.8%	262,065	74	280	1.4%	79	300	1.4%	85	320	1.3%	90	320	1.3%	90	320	1.3%	90	320	1.3%	90	320	1.3%
39	[011]	PADEMANGAN	1,191	0.3%	-0.4%	1.4%	1.4%	144,743	122	155	1.4%	130	165	1.3%	139	175	1.2%	147	175	1.2%	147	175	1.2%	147	175	1.2%	147	175	1.2%
40	[020]	TANJUNG PRIOK	2,490	3.1%	5.6%	0.8%	0.8%	328,272	132	340	0.7%	137	350	0.6%	141	360	0.6%	145	360	0.6%	145	360	0.6%	145	360	0.6%	145	360	0.6%
41	[030]	KOJA	1,134	1.6%	4.1%	-0.4%	-0.4%	288,271	254	280	-0.6%	247	270	-0.7%	238	260	-0.7%	229	260	-0.7%	229	260	-0.7%	229	260	-0.7%	229	260	-0.7%
42	[031]	KELAPA GADING	1,612	9.1%	5.1%	6.4%	6.4%	103,223	64	130	5.2%	81	150	3.1%	93	170	2.7%	105	170	2.7%	105	170	2.7%	105	170	2.7%	105	170	2.7%
43	[040]	CILINCING	4,256	2.6%	2.9%	1.8%	1.8%	221,548	52	240	1.7%	56	260	1.7%	61	280	1.5%	66	280	1.5%	66	280	1.5%	66	280	1.5%	66	280	1.5%
44	[050]	KEPULAUAN SERIBU	1,180	1.9%	1.4%	1.1%	1.1%	14,826	13	15	0.2%	13	15	0.0%	13	15	0.0%	13	15	0.0%	13	15	0.0%	13	15	0.0%	13	15	0.0%
45	[03]	BOGOR	54,889	4.3%	1.4%	4.3%	4.3%	1,963,746	36	2,300	3.4%	42	2,800	4.3%	51	3,300	3.6%	60	3,300	3.6%	60	3,300	3.6%	60	3,300	3.6%	60	3,300	3.6%
46	[150]	CIMANGGIS	13,864	1.4%	0.3%	1.4%	1.4%	418,277	30	430	0.6%	31	460	1.4%	33	490	1.3%	35	490	1.3%	35	490	1.3%	35	490	1.3%	35	490	1.3%
47	[200]	SAWANGAN	5,340	4.8%	4.8%	4.8%	4.8%	220,308	41	220	0.0%	41	230	0.9%	43	245	1.3%	46	245	1.3%	46	245	1.3%	46	245	1.3%	46	245	1.3%
48	[201]	LIMO	4,602	11.0%	11.0%	11.0%	11.0%	50,127	17	80	0.8%	17	90	2.5%	20	95	1.1%	21	95	1.1%	21	95	1.1%	21	95	1.1%	21	95	1.1%
49	[720]	BEJI	2,308	-3.7%	-3.7%	-3.7%	-3.7%	71,034	22	70	7.9%	30	80	2.9%	35	85	1.3%	37	85	1.3%	37	85	1.3%	37	85	1.3%	37	85	1.3%
50	[18]	BEKASI	1,614	0.3%	0.3%	0.3%	0.3%	484,135	44	60	-3.1%	37	60	0.0%	37	65	1.7%	40	65	1.7%	40	65	1.7%	40	65	1.7%	40	65	1.7%
51	[010]	FONDOK GEDE	14,706	0.1%	0.1%	0.1%	0.1%	206,512	33	490	0.2%	33	500	0.4%	34	510	0.4%	35	510	0.4%	35	510	0.4%	35	510	0.4%	35	510	0.4%
52	[011]	JATIASIH	4,868	-2.5%	-2.5%	-2.5%	-2.5%	75,614	29	70	-1.5%	27	70	0.0%	27	70	0.0%	27	70	0.0%	27	70	0.0%	27	70	0.0%	27	70	0.0%
53	[100]	TARUMAJAYA	2,585	0.6%	0.6%	0.6%	0.6%	37,560	7	40	1.3%	8	40	0.0%	8	40	0.0%	8	40	0.0%	8	40	0.0%	8	40	0.0%	8	40	0.0%
54	[730]	BEKASI BARAT	5,069	1.7%	1.7%	1.7%	1.7%	164,449	75	170	0.7%	78	180	1.2%	82	180	0.0%	82	180	0.0%	82	180	0.0%	82	180	0.0%	82	180	0.0%
55	[19]	TANGERANG	2,184	6.2%	6.2%	6.2%	6.2%	566,468	35	700	4.7%	43	900	5.7%	55	1,080	4.0%	66	1,080	4.0%	66	1,080	4.0%	66	1,080	4.0%	66	1,080	4.0%
56	[060]	CIPUTAT	16,310	6.2%	6.2%	6.2%	6.2%	195,506	55	250	5.6%	70	320	5.6%	89	380	3.8%	106	380	3.8%	106	380	3.8%	106	380	3.8%	106	380	3.8%
57	[061]	PAMULANG	2,762	6.2%	6.2%	6.2%	6.2%	123,257	45	150	4.3%	54	190	5.3%	69	230	4.2%	83	230	4.2%	83	230	4.2%	83	230	4.2%	83	230	4.2%
58	[070]	PONDOK AREN	2,936	6.2%	6.2%	6.2%	6.2%	113,029	38	140	4.8%	48	180	5.7%	61	210	3.3%	72	210	3.3%	72	210	3.3%	72	210	3.3%	72	210	3.3%
59	[160]	TELUKNAGA	3,968	6.2%	6.2%	6.2%	6.2%	77,749	20	90	3.2%	23	120	6.7%	30	150	5.0%	38	150	5.0%	38	150	5.0%	38	150	5.0%	38	150	5.0%
60	[161]	KOSAMBI	3,064	6.2%	6.2%	6.2%	6.2%	56,927	19	70	4.6%	23	90	5.7%	29	110	4.4%	36	110	4.4%	36	110	4.4%	36	110	4.4%	36	110	4.4%

Kecamatan

## 12-4 FUTURE POPULATION BY KECAMATAN, 1990 - 2019

Propinsi	Kabupaten /Kotamadya	Kecamatan	2010			2015			2019		
			Population *1000	Rate %/yr	Density /ha	Population *1000	Rate %/yr	Density /ha	Population *1000	Rate %/yr	Density /ha
29		[010] KEBONJERUK	330	1.0%	188	340	0.6%	194	350	0.7%	200
30		[011] KEMBANGAN	285	2.8%	116	320	2.5%	130	350	2.3%	142
31		[020] GENGKARENG	515	0.8%	184	535	0.8%	192	540	0.2%	193
32		[021] KALIDERES	305	2.6%	111	345	2.6%	126	380	2.5%	139
33		[030] GROGOL PETAMBURAN	240	0.0%	213	240	0.0%	213	235	-0.5%	208
34		[031] PALMERAH	205	-0.5%	272	200	-0.5%	265	195	-0.6%	259
35		[040] TAMBORA	235	-0.4%	429	230	-0.4%	420	225	-0.5%	411
36		[050] TAMAN SARI	115	-0.8%	264	110	-0.9%	252	105	-1.1%	241
		[75] JAKARTA UTARA	1,650	0.9%	107	1,720	0.8%	112	1,760	0.6%	114
37		[010] PENJARINGAN	340	1.3%	96	360	1.2%	101	370	0.7%	104
38		[011] PADEMANGAN	185	1.1%	155	195	1.1%	164	200	0.6%	168
39		[020] TANJUNG PRIOK	370	0.6%	149	380	0.5%	153	380	0.0%	153
40		[030] KOJA	250	-0.8%	220	240	-0.8%	212	235	-0.5%	207
41		[031] KELAPA GADING	190	2.4%	118	210	2.1%	130	225	1.8%	140
42		[040] CILINCING	300	1.4%	70	320	1.3%	75	335	1.2%	79
43		[050] KEPULAUAN SERIBU	15	0.0%	13	15	0.0%	13	15	0.0%	13
		[32] JAWA BARAT	3,800	3.0%	69	4,300	2.6%	78	4,600	1.7%	84
		[03] BOGOR	520	1.2%	38	550	1.2%	40	600	2.3%	43
44		[150] CIMANGGIS	260	1.2%	49	275	1.2%	51	300	2.3%	56
45		[200] SAWANGAN	100	1.1%	22	105	1.0%	23	115	2.4%	25
46		[201] LIMO	90	1.2%	39	95	1.1%	41	105	2.6%	45
47		[720] BEJI	70	1.5%	43	75	1.4%	46	80	1.7%	50
		[18] BEKASI	530	0.8%	36	600	2.6%	41	700	4.2%	48
48		[010] PONDOK GEDE	220	0.0%	45	250	2.7%	51	280	3.0%	58
49		[011] JATASIH	70	0.0%	27	80	2.9%	31	100	6.3%	39
50		[100] TARUMAJAYA	50	5.0%	10	60	4.0%	12	70	4.2%	14
51		[730] BEKASI BARAT	190	1.1%	87	210	2.1%	96	250	4.8%	114
		[19] TANGERANG	1,270	3.5%	78	1,550	4.4%	95	1,700	2.4%	104
52		[060] CIPUTAT	440	3.2%	123	540	4.5%	151	580	1.9%	162
53		[061] PAMULANG	270	3.5%	98	330	4.4%	119	360	2.3%	130
54		[070] PONDOK AREN	250	3.8%	85	300	4.0%	102	340	3.3%	116
55		[160] TELUKNAGA	180	4.0%	45	220	4.4%	55	240	2.3%	60
56		[161] KOSAMBI	130	3.6%	42	160	4.6%	52	180	3.1%	59

## 12-5 FUTURE POPULATION BY KECAMATAN, 1990 - 2019

Propinsi	Kecamatan	Area 1993 (ha)	Population Growth Rate					1990			1995			2000			2005		
			84-93 %/yr	85-89 %/yr	89-93 %/yr	90-93 %/yr	Population	Density /ha	Population *1000	Rate %/yr	Density /ha	Population *1000	Rate %/yr	Density /ha	Population *1000	Rate %/yr	Density /ha		
	[75] Kotamadya TANGERANG	10,009				8.7%	494,866	49	680	7.5%	68	940	7.6%	94	1,220	6.0%	122		
57	[010] CILEDUG	2,549				11.0%	191,112	75	280	9.3%	110	410	9.3%	161	460	2.4%	180		
58	[020] CIPONDOH	3,970				9.3%	140,767	35	190	7.0%	48	260	7.4%	65	400	10.8%	101		
59	[050] BATU CEPER	2,364				5.4%	124,912	53	160	5.6%	68	200	5.0%	85	260	6.0%	110		
60	[060] BENDA	1,126				5.3%	38,075	34	50	6.3%	44	70	8.0%	62	100	8.6%	89		
	Investigation Area Total	121,015	3.7%	3.1%	4.0%	-1.9%	10,186,261	84	11,100	1.8%	92	12,200	2.0%	101	13,200	1.6%	109		

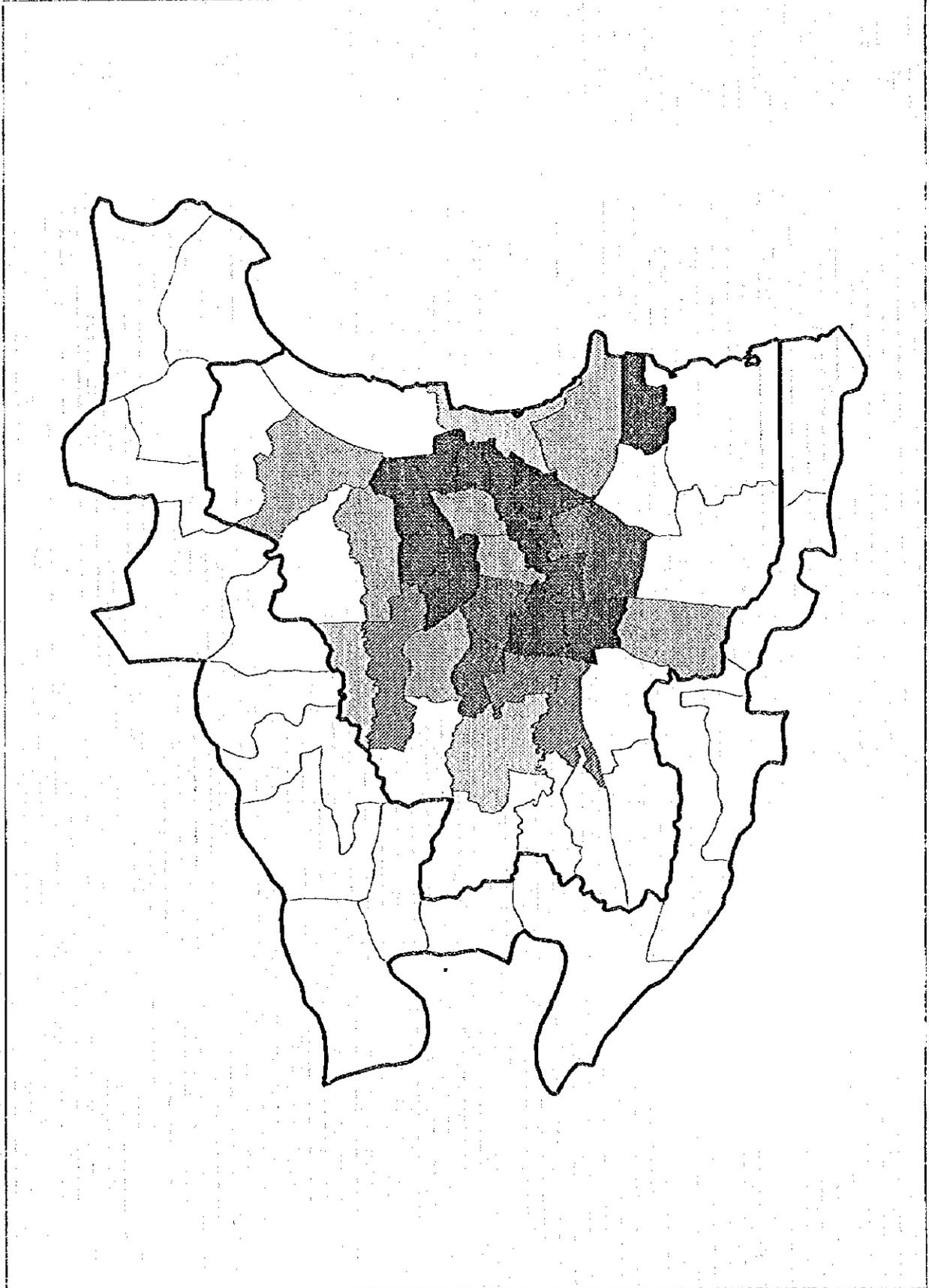
Kecamatan

## 12-6 FUTURE POPULATION BY KECAMATAN, 1990 - 2019

Propinsi	Kecamatan	2010			2015			2019		
		Population *1000	Rate %/yr	Density /ha	Population *1000	Rate %/yr	Density /ha	Population *1000	Rate %/yr	Density /ha
	Kabupaten									
	/Kotamadya									
57	[75] Kotamadya TANGERANG	1,480	4.3%	148	1,600	1.6%	160	1,600	0.0%	160
	[010] CILEDUG	500	1.7%	196	500	0.0%	196	500	0.0%	196
58	[020] CIPONDOH	530	6.5%	134	600	2.6%	151	600	0.0%	151
59	[050] BATU CEPER	310	3.8%	131	350	2.6%	148	350	0.0%	148
60	[060] BENDA	140	8.0%	124	150	1.4%	133	150	0.0%	133
	Investigation Area Total	14,200	1.5%	117	15,200	1.4%	126	15,800	1.0%	131

POPULATION DENSITY IN 1990

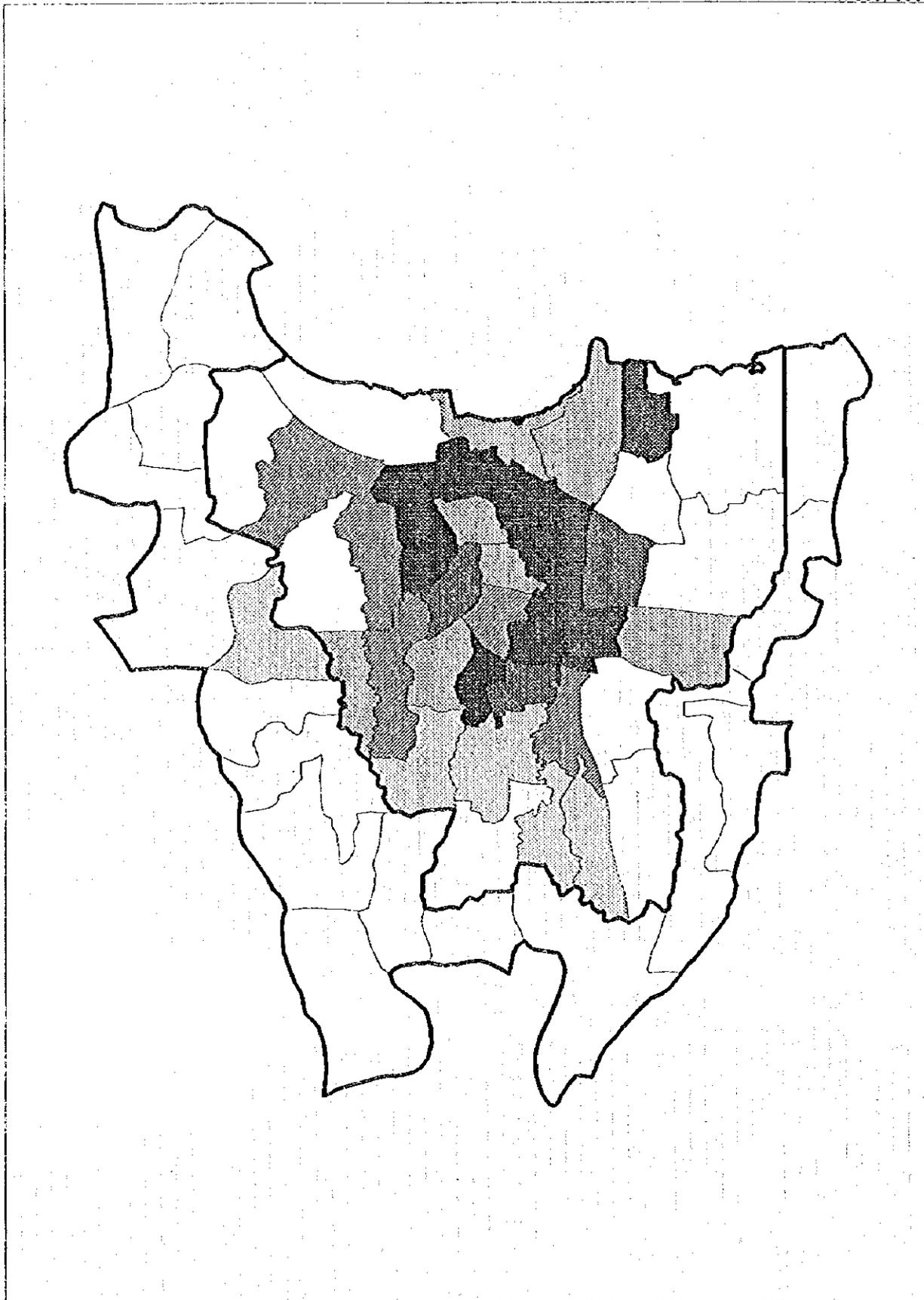
Annex-33 - 37  
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175 <	[Dense cross-hatch]	200
200 <	[Solid black]	999

POPULATION DENSITY IN 1995

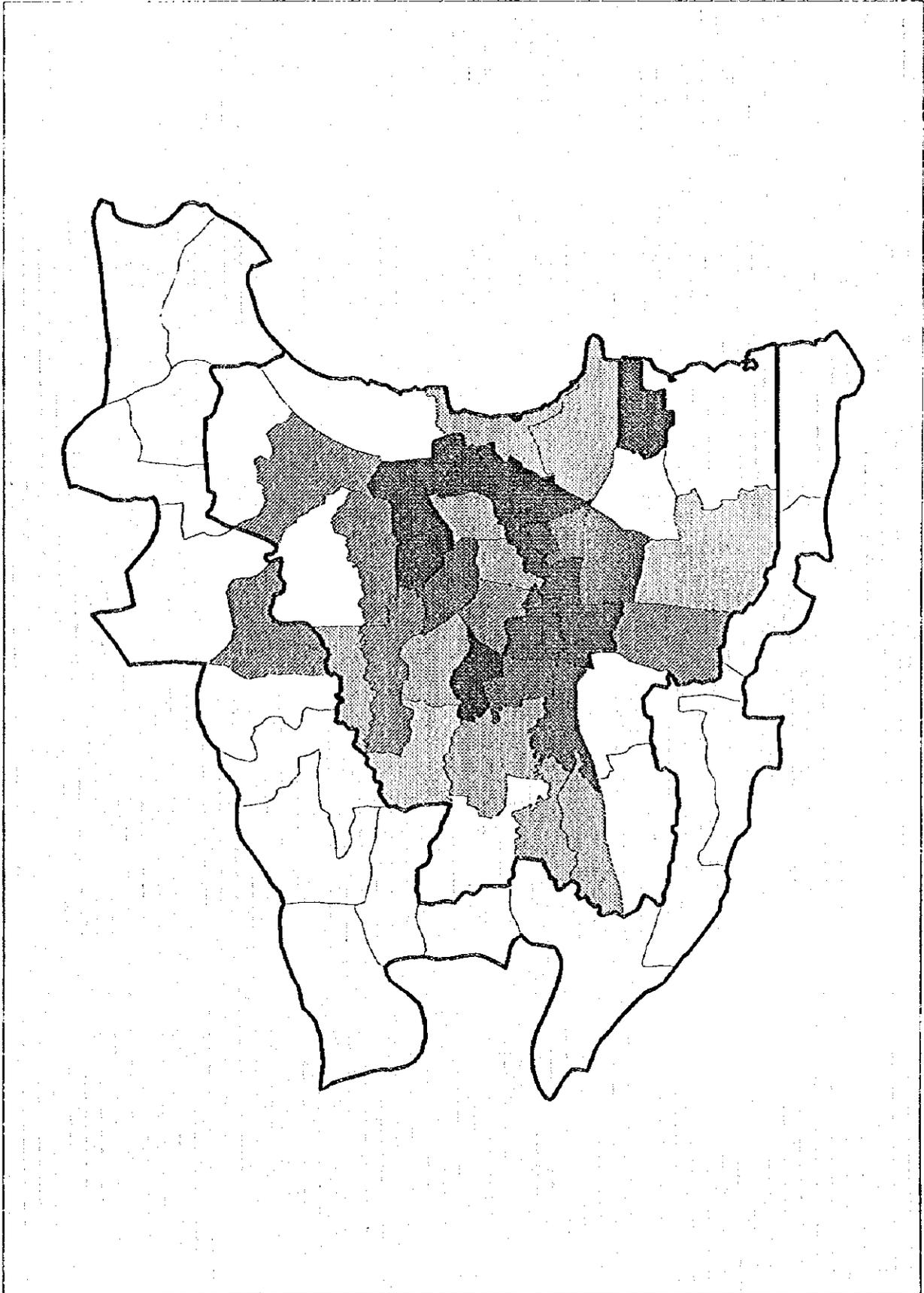
Annex-33 - 38  
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POPULATION DENSITY IN 2000

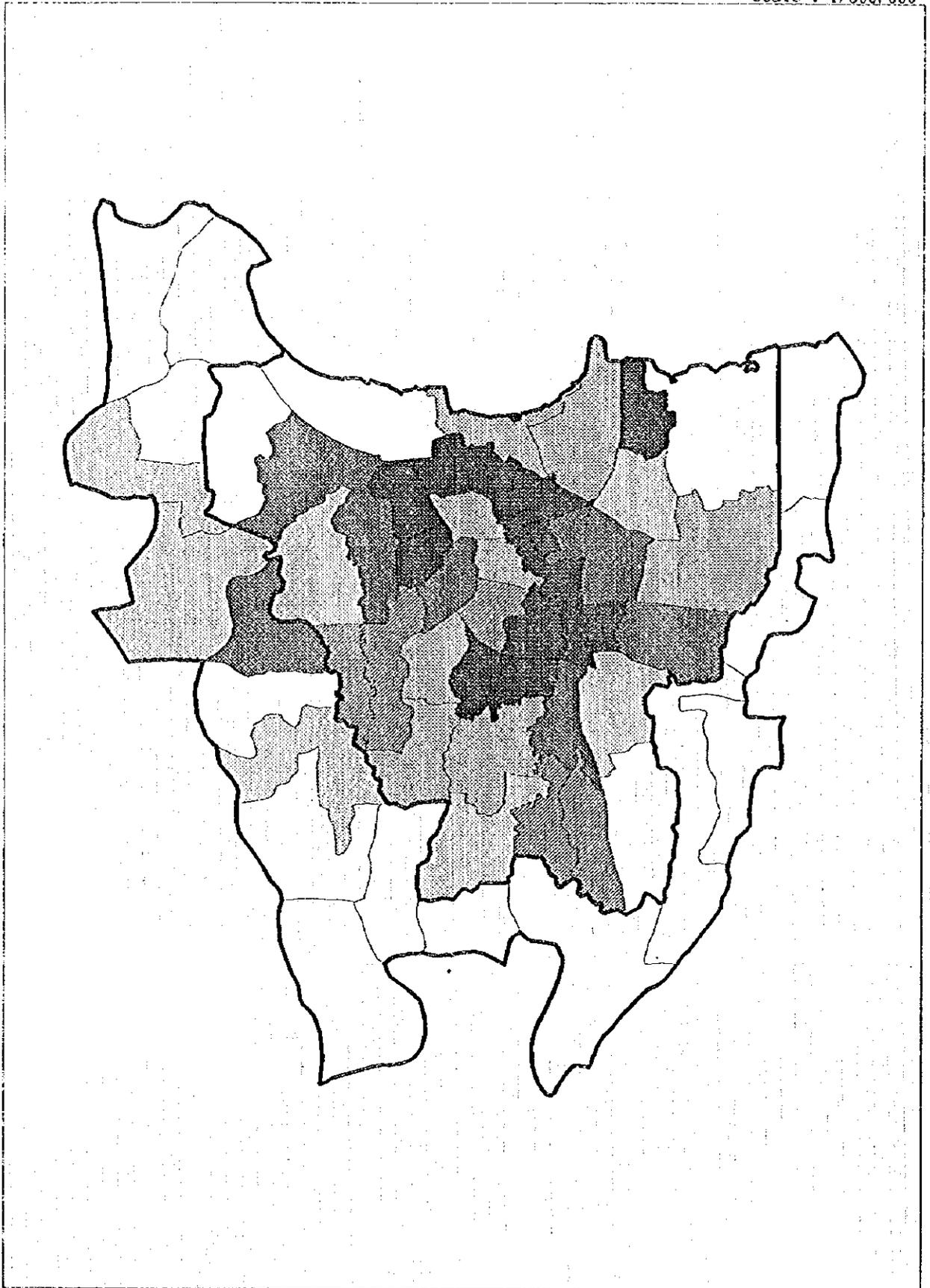
Annex-33 - 39  
Scale : 1/300,000



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POPULATION DENSITY IN 2005

Annex-33 - 40  
Scale : 1/300,000

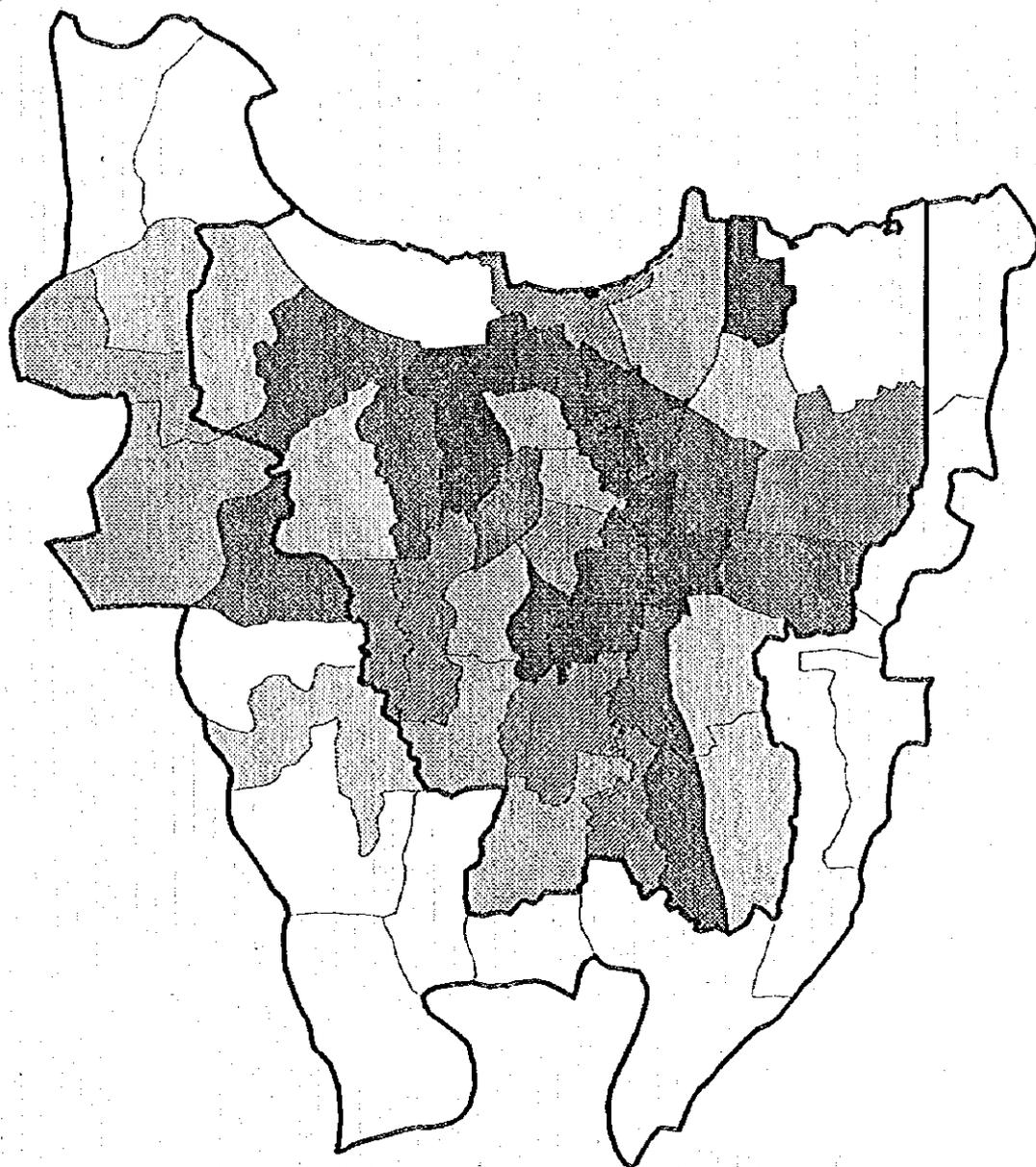


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POPULATION DENSITY IN 2010

Annex-33 - 41

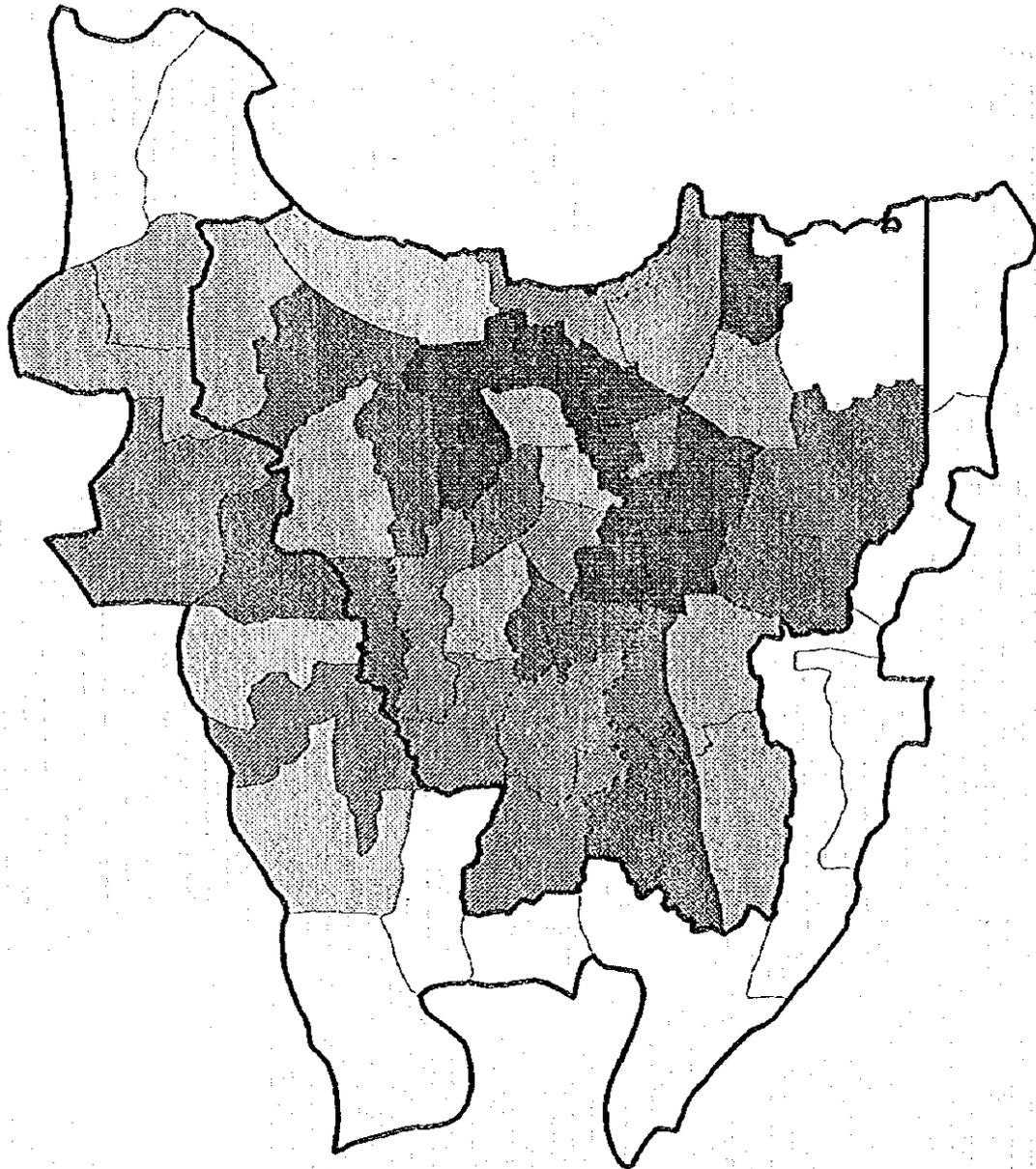
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POPULATION DENSITY IN 2015

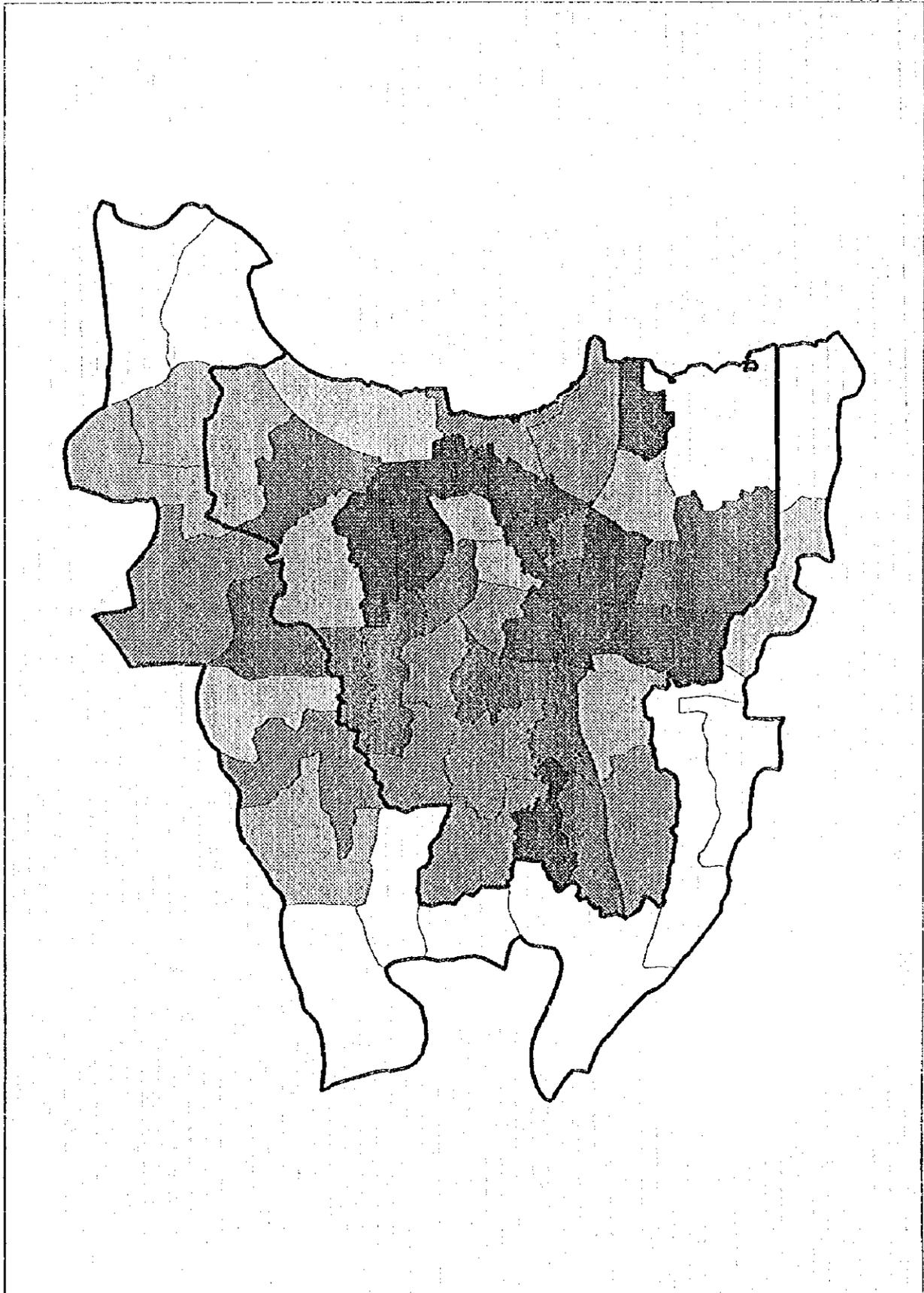
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POPULATION DENSITY IN 2019

Annex-33 - 43  
Scale : 1/300,000



0 <		100
100 <		125
125 <		150
150 <		175
175 <		200
200 <		999

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**ANNEX-34**

**SERVICE AREA**

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1. INFORMATION OF FRINGE AREA
2. SERVICE AREA
3. FUTURE POPULATION DENSITY AND GROUNDWATER CONDITION IN UNSERVED  
KECAMATAN
4. NECESSITY OF PIPED WATER SUPPLY SERVICE
5. SELECTION OF FRINGE AREA TO BE SUPPLIED BY PAM JAYA SYSTEM
6. FRINGE AREA TO BE SERVED BY PAM JAYA SYSTEM

**INFORMATION OF FRINGE AREA**

	General Information		Present service Condition		Population Density 2019/ha	Future Plan of PDAM		Groundwater Condition			Others	
	Admin. Area (hs)	Popu. density 1995/ha	Service Area (%)	Water Source Condition		Facility Condition	S. Area (%)	Water Source	Present (1990) Quality (Contami.)	Future (2025) Quality (Contami.)		Quantity (Short risk)
<b>BOGOR</b>												
150 CIMANGGIS	5,340	41	50 - 110	15 N.P.	N.P.	56	15	Not R.P.	Low	<0.3	Good	near Cibumal
200 SAWANGAN	4,602	17	50 - 100	10 N.P.	N.P.	25	40	Not R.P.	Low	<0.3	Good	
201 LIMO	2,308	30	50 - 80	0	-	45	100	Not R.P.	Low	<0.3	Good	
720 BEJI	1,614	37	60 - 80	100 N.P.	N.P.	50	-	-	Low	<0.3	Good	near Cibumal
<b>DATA SOURCE:</b>	Study	Map		Drawing	Hearing	Study	Drawing	Hearing	JWRMS	JWRMS (C1)	Map	Drawing
<b>REMARKS</b>	Population density =(Estimated pop.1995)/ (Administrative Area)											
<b>BEKASI</b>												
10 PONDOK GEDE	4,868	43	25 - 60	0	-	58	100	WTC	Low	<0.3	Good	
11 JATIASHI	2,585	27	25 - 60	0	-	39	100	WTC	Low	<0.3	Good	
100 TARUMAJAYA	5,069	8	< 5	0	-	14	100	WTC	Saline/Low	<0.3	Good	
730 BEKASI BARAT	2,184	78	5 - 25	5(50)	WTC	114	95	WTC	Low	0.5-0.75	Good	
<b>DATA SOURCE:</b>	Study	Map		Hearing	Hearing	Study	Drawing	Hearing	JWRMS	JWRMS (C1)	Map	Drawing
<b>REMARKS</b>	Service area of Bekasi barat will soon become 50% (Hearing)											
<b>TANGERANG</b>												
60 CIPUTAT	3,580	70	25 - 50	0	-	162	15	Not R.P.	M.Low	<0.3	Good	near Cisadane
61 PAMELANG	2,762	54	30 - 60	0	-	130	50	Not R.P.	M.Low	<0.3	Good	near Cisadane
70 PONDOK AREN	2,936	48	10 - 50	0	-	116	20	Not R.P.	M.Low	<0.3	Good	near Cisadane
160 TELUKNAGA	3,968	23	< 5	5 N.P.	N.P.	60	0	-	Saline/Low	<0.3	Not so G	
161 KOSAMBI	3,064	23	< 5	5 N.P.	N.P.	59	10	Not R.P.	Saline/Low	0.3-0.5	Good	
<b>DATA SOURCE:</b>	Study	Map		Drawing	Hearing	Study	Drawing	Hearing	JWRMS	JWRMS (C1)	Map	Drawing
<b>REMARKS</b>	Inadequate quality at present in Ciputat and Pamulang (Hearing)											
<b>Kotamadya TANGERANG</b>												
10 CILEDUG	2,549	110	about 15	0	-	196	0	-	M.High	0.5-0.75	Good	
20 CIPONDOK	3,970	48	about 14	10 N.P.	N.P.	151	50	Not R.P.	M.High	<0.3	Good	
50 BATU CEPEL	2,364	68	about 14	30 N.P.	N.P.	148	0	-	M.Low	<0.3	Not so G	
60 BENDA	1,126	44	about 14	0	-	133	10	Not R.P.	Saline/M.L	0.3-0.5	Good	
<b>DATA SOURCE:</b>	Study	Map		Drawing	Hearing	Study	Drawing	Hearing	JWRMS	JWRMS (C1)	Map	Drawing
<b>REMARKS</b>	Supply to airport in Batu Ceper and Benda is excluded in the figure											
<b>Note :</b>	N.P. : No big problem Not R.P. : Not Rigid Plan Good access : near to Jakarta and access road exist											
	These figures might be subject to change by further detailed alternative studies and/or implementation arrangement											

Drawing : Drawing prepared by PDAM Kabupaten  
Hearing : Hearing from PDAM staff

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## SERVICE AREA

Kotamadya	Administrative Area	Service Area											
		1995		2000		2005		2010		2015		2019	
Kecamatan	ha	ha	%	ha	%	ha	%	ha	%	ha	%	ha	%
[31] DKI JAKARTA	66,126	31,643	48	43,525	66	50,454	76	64,946	98	64,946	98	64,946	98
[71] JAKARTA SELATAN	14,537	5,777	40	9,572	66	10,111	70	14,537	100	14,537	100	14,537	100
[010] KEBAYORAN LAMA	1,931	772	40	1,931	100	1,931	100	1,931	100	1,931	100	1,931	100
[011] PESANGGRAHAN	1,347	0	0	269	20	808	60	1,347	100	1,347	100	1,347	100
[020] CILANDAK	1,820	546	30	1,092	60	1,092	60	1,820	100	1,820	100	1,820	100
[030] PASAR MINGGU	2,191	110	5	1,534	70	1,534	70	2,191	100	2,191	100	2,191	100
[031] JAGAKARSA	2,502	0	0	0	0	0	0	2,502	100	2,502	100	2,502	100
[040] MAMPANG PRAPATAN	774	542	70	774	100	774	100	774	100	774	100	774	100
[041] PANCORAN	823	658	80	823	100	823	100	823	100	823	100	823	100
[050] KEBAYORAN BARU	1,291	1,291	100	1,291	100	1,291	100	1,291	100	1,291	100	1,291	100
[060] SETIA BUDI	905	905	100	905	100	905	100	905	100	905	100	905	100
[070] TEBET	953	953	100	953	100	953	100	953	100	953	100	953	100
[72] JAKARTA TIMUR	18,773	7,051	38	10,356	55	12,426	66	18,773	100	18,773	100	18,773	100
[010] PASAR REBO	1,294	259	20	259	20	259	20	1,294	100	1,294	100	1,294	100
[011] CIRACAS	1,608	322	20	322	20	322	20	1,608	100	1,608	100	1,608	100
[012] CIPAYUNG	2,735	0	0	0	0	0	0	2,735	100	2,735	100	2,735	100
[020] KRAMAT JATI	1,334	1,067	80	1,334	100	1,334	100	1,334	100	1,334	100	1,334	100
[021] MAKASAR	2,164	108	5	108	5	1,288	60	2,164	100	2,164	100	2,164	100
[030] JATINEGARA	1,064	638	60	1,064	100	1,064	100	1,064	100	1,064	100	1,064	100
[031] DUREN SAWIT	2,281	912	40	1,825	80	2,281	100	2,281	100	2,281	100	2,281	100
[040] MATRAMAN	485	485	100	485	100	485	100	485	100	485	100	485	100
[050] PULO GADUNG	1,561	1,561	100	1,561	100	1,561	100	1,561	100	1,561	100	1,561	100
[060] CAKUNG	4,247	1,699	40	3,398	80	3,822	90	4,247	100	4,247	100	4,247	100
[73] JAKARTA PUSAT	4,790	4,790	100	4,790	100	4,790	100	4,790	100	4,790	100	4,790	100
[010] TANAH ABANG	930	930	100	930	100	930	100	930	100	930	100	930	100
[020] MENTENG	653	653	100	653	100	653	100	653	100	653	100	653	100
[030] SENEN	423	423	100	423	100	423	100	423	100	423	100	423	100
[040] CEMPAKA FUTUH	469	469	100	469	100	469	100	469	100	469	100	469	100
[041] JOHAR BARU	238	238	100	238	100	238	100	238	100	238	100	238	100
[050] KEMAYORAN	725	725	100	725	100	725	100	725	100	725	100	725	100
[060] SAWAH BESAR	592	592	100	592	100	592	100	592	100	592	100	592	100
[070] GAMBIR	760	760	100	760	100	760	100	760	100	760	100	760	100
[74] JAKARTA BARAT	12,615	5,795	46	8,337	66	10,741	85	12,615	100	12,615	100	12,615	100
[010] KEBON JERUK	1,751	1,576	90	1,751	100	1,751	100	1,751	100	1,751	100	1,751	100
[011] KEMBANGAN	2,464	246	10	1,232	50	1,971	80	2,464	100	2,464	100	2,464	100
[020] CENGKARENG	2,793	559	20	1,117	40	2,234	80	2,793	100	2,793	100	2,793	100
[021] KALI DERES	2,749	548	20	1,370	50	1,918	70	2,749	100	2,749	100	2,749	100
[030] GROGOL PETAMBURAN	1,129	1,129	100	1,129	100	1,129	100	1,129	100	1,129	100	1,129	100
[031] PALMERAH	754	754	100	754	100	754	100	754	100	754	100	754	100
[040] TAMBORA	548	548	100	548	100	548	100	548	100	548	100	548	100
[050] TAMAN SARI	436	436	100	436	100	436	100	436	100	436	100	436	100
[75] JAKARTA UTARA	15,411	8,229	53	10,470	68	12,386	80	14,231	92	14,231	92	14,231	92
[010] PENJARINGAN	3,548	1,064	30	1,064	30	2,129	60	3,548	100	3,548	100	3,548	100
[011] PADEMANGAN	1,191	1,191	100	1,191	100	1,191	100	1,191	100	1,191	100	1,191	100
[020] TANJUNG PRIOK	2,490	2,490	100	2,490	100	2,490	100	2,490	100	2,490	100	2,490	100
[030] KOJA	1,134	1,021	90	1,134	100	1,134	100	1,134	100	1,134	100	1,134	100
[031] KELAPA GADING	1,612	1,612	100	1,612	100	1,612	100	1,612	100	1,612	100	1,612	100
[040] CILINCING	4,256	851	20	2,979	70	3,830	90	4,256	100	4,256	100	4,256	100
[050] KEPULAUAN SERIBU	1,180	0	0	0	0	0	0	0	0	0	0	0	0
[32] JAWA BARAT	54,889	0	0	0	0	0	0	6,519	12	18,718	34	22,171	40
[03] BOGOR	13,864	0	0	0	0	0	0	0	0	0	0	1,385	10
[150] CIMANGGIS	5,340	0	0	0	0	0	0	0	0	0	0	0	0
[200] SAWANGAN	4,602	0	0	0	0	0	0	0	0	0	0	0	0
[301] LIMO	2,308	0	0	0	0	0	0	0	0	0	0	1,385	60
[720] BEN	1,614	0	0	0	0	0	0	0	0	0	0	0	0
[18] BEKASI	14,706	0	0	0	0	0	0	0	0	2,921	20	4,989	34
[010] PONDOK GEDE	4,868	0	0	0	0	0	0	0	0	2,921	60	2,921	60
[011] JATIASIH	2,585	0	0	0	0	0	0	0	0	0	0	2,068	80
[100] TARUMAJAYA	5,069	0	0	0	0	0	0	0	0	0	0	0	0
[730] BEKASI BARAT	2,184	0	0	0	0	0	0	0	0	0	0	0	0
[19] TANGERANG	16,310	0	0	0	0	0	0	0	0	9,278	57	9,278	57
[080] CIPUTAT	3,580	0	0	0	0	0	0	0	0	3,580	100	3,580	100
[061] PANULIANG	2,762	0	0	0	0	0	0	0	0	2,762	100	2,762	100
[070] PONDOK AREN	2,936	0	0	0	0	0	0	0	0	2,936	100	2,936	100
[160] TELUKNAGA	3,958	0	0	0	0	0	0	0	0	0	0	0	0
[161] KOSAMBI	3,064	0	0	0	0	0	0	0	0	0	0	0	0
[75] Kotamadya TANGERANG	10,009	0	0	0	0	0	0	6,519	65	6,519	65	6,519	65
[010] CILEDUG	2,549	0	0	0	0	0	0	2,549	100	2,549	100	2,549	100
[020] CIPONDOK	3,970	0	0	0	0	0	0	3,970	100	3,970	100	3,970	100
[050] BATU CEPER	2,364	0	0	0	0	0	0	0	0	0	0	0	0
[060] BENDA	1,126	0	0	0	0	0	0	0	0	0	0	0	0
Investigation Area Total	121,015	31,643	26	43,525	36	50,454	42	71,465	59	83,664	69	87,117	72

### FUTURE POPULATION DENSITY AND GROUNDWATER CONDITION IN UNSERVED KECAMATAN

Kotamadya	Present Unserved Kecamatan	Population	Present	Potential	Permissive	Sufficiency	Insufficiency	Possibility of	
		Density (2019) /ha a	Service Area % b	water de- mand 2019 l/sec c	yield of G.w. (2019) l/sec d	of G.water (2019) % e=d/c	of G.water (2019) l/sec f=e-d	% g=f/c	in 2025 h
[31] DKI JAKARTA									
[71] JAKARTA SELATAN									
[010] KEBAYORAN LAMA		176	40	717	136	19	581	81	M.Low
[011] PESANGGRAHAN		189	0	498	95	19	403	81	Low
[020] CILANDAK		168	30	669	128	19	541	81	Low
[030] PASAR MINGGU		171	5	779	154	20	625	80	M.Low
[031] JAGAKARSA		166	0	807	160	20	647	80	Low
[040] MAMPANG PRAPATAN		187	70	451	54	12	397	88	M.Low
[041] PANCORAN		188	80	369	58	15	311	84	M.Low
[72] JAKARTA TIMUR									
[010] PASAR REBO		201	20	605	83	14	522	86	Low
[011] CIRACAS		199	20	662	103	16	559	84	Low
[012] CIPAYUNG		157	0	826	175	21	651	79	Low
[020] KRAMAT JATI		195	80	567	94	17	473	83	M.Low
[021] MAKASAR		134	5	583	152	26	431	74	Low
[030] JATINEGARA		263	60	649	75	12	574	88	M.Low
[031] DUREN SAWIT		202	40	936	161	17	775	83	Low
[060] CAKUNG		188	40	1,910	132	7	1,778	93	Low/Saline(N)
[74] JAKARTA BARAT									
[010] KEBON JERUK		200	90	793	54	7	739	93	M.High
[011] KEMBANGAN		142	10	743	77	10	666	90	Low
[020] CENGKARENG		193	20	1,243	87	7	1,156	93	Salinity/M.High
[021] KALI DERES		139	20	823	85	10	738	90	Salinity/M.Low
[75] JAKARTA UTARA									
[010] PENJARINGAN		104	30	986	110	11	876	89	Salinity/Low
[030] KOJA		207	90	479	35	7	444	93	Salinity/M.High
[040] CILINCING		79	20	656	132	20	524	80	Salinity/M.Low

\* : Data Source for Possibility of Groundwater Contamination is JWRMS report (case C1)

## NECESSITY OF PIPED WATER SUPPLY SERVICE

Kotamadya	Kecamatan	Population Density (2019)		Potential water demand (2019)	Permissive yield of G.w. (2019)	Sufficiency of G.water (2019)		Insufficiency of G.water (2019)		Possibility of Groundwater Contamination in 2025 *	Groundwater Condition as alternative water source	Pop.density, Development plan etc	Required Water Supply System in future
		a	b			c	d=c/b	e=b-c	f=c/b				
[32] JAWA BARAT	[03] BOGOK												
	[150] CIMANGGIS	56	963	342	36	621	64	Low	Good	Low Pop.dens.	Water terminal / Private well		
	[200] SAWANGAN	25	177	295	167	0	0	Low	Good	Low Pop.dens.	Private well		
	[201] LIMO	45	156	148	95	8	5	Low	Good	H.E. in north	H.E. / Private well		
	[720] BEJI	50	112	103	92	9	8	Low	Good	City area	Piped water / Private well		
[18] BEKASI	[010] PONDOK GEDE	58	451	312	69	139	31	Low	Good	H.E. in north	H.E. / Private well		
	[011] JATIASHIH	39	148	166	112	0	0	Low	Good	H.E. in north	H.E. / Private well		
	[100] TARUMAJAYA	14	252	158	63	94	37	Salinity/Low		Low Pop.dens.	Private well / Water terminal		
	[730] BEKASI BARAT	114	834	68	8	766	92	Low			Piped water		
[19] TANGERANG	[060] CIPUTAT	162	1,134	229	20	905	80	Low			Piped water		
	[061] PAMULANG	130	684	177	26	507	74	Low			Piped water		
	[070] PONDOK AREN	116	635	188	30	447	70	Low			Piped water		
	[160] TELUKVAGA	60	414	123	30	291	70	Salinity/Low		Low Pop.dens.	Water terminal / Private well		
	[161] XOSAMBI	59	313	95	30	218	70	Salinity/Low		Low Pop.dens.	Water terminal / Private well		
[75] Kotamadya TANGERANG	[010] CILEDUG	196	1,285	79	6	1,206	94	M.High			Piped water		
	[020] CIPONDOH	151	1,301	124	10	1,177	90	Low			Piped water		
	[050] BATU CEPER	148	607	74	12	533	88	Low			Piped water		
	[060] BENDA	133	253	35	14	218	86	Low/Saline(E)			Piped water		

Note : H.E. : H.E. means Housing Estate. Water will be supplied by piped system in Housing Estates.

\* : Data Source for Possibility of Groundwater Contamination is JWRMS report (case C1)

□ : Kecamatan required piped water supply service.

## SELECTION OF FRINGE AREA TO BE SUPPLIED BY PAM JAYA SYSTEM

	Present Service Area(%)	Future Plan by PDAM	Disadvantage / Advantage of PAM's Supply	Appropriate Supplier		Major Reasons for selection of appropriate supplier
				PAM JAYA	Others	
03 BOGOR						
201 LIMO	0	not rigid	Higher GL	Future Housing Estate Area	Mainly Private well	Housing Estate plan of Lower GL near Jakarta
720 BEJI	100	not rigid	near Ciburial High GL	No	PDAM Bogor	PDAM Bogor is expanding service area
18 BEKASI						
10 PONDOK GEDE (incl. JATISAMPURUNA)	0	not rigid	-	Future Housing Estate Area	Mainly Private well	Housing Estate
11 JATIASHIH	0	not rigid	-	Future Housing Estate Area	Mainly Private well	Housing Estate
730 BEKASI BARAT	5(50)*	not rigid	-	No	PDAM Bekasi	PDAM Bekasi is expanding service area
19 TANGERANG						
60 CIPUTAT	0	not rigid	near Cisadane	PAM JAYA		Short Distance from Cisadane system
61 PAMULANG	0	not rigid	near Cisadane	PAM JAYA		Short Distance from Cisadane system
70 PONDOK AREN	0	not rigid	near Cisadane	PAM JAYA		Short Distance from Cisadane system
75 Kotamadya TANGERANG						
10 CILEDUG	0	not rigid	-	PAM JAYA		No obvious obstacle in the supply by PAM JAYA
20 CIPONDOH	10	not rigid	-	PAM JAYA		No obvious obstacle in the supply by PAM JAYA
50 BATU CEPER	30	not rigid	Behind airport	No	PDAM Tangerang	Easier expansion of PDAM's existing system which is now supplying to airport.
60 BENDA	0	not rigid	-	No	PDAM Tangerang	Easier expansion of PDAM's existing system which is now supplying to airport.

NOTE \* : Service area of Bekasi Barat is now 5% and will soon become 50% . The information was obtained by Hearing from staff of PDAM Bogor.  
 : Kecamatan to be supplied by PAM JAYA.

### E fringe Area to be Served by PAM JAYA SYSTEM

	Mainly supplied by	Remarks / Major Reasons
<b>BOGOR</b>		
150 CIMANGGIS	Water terminal / Private well	Low population density, Groundwater quality, High Ground Level
200 SAWANGAN	Private well	Sufficient Groundwater
201 LIMO	PAM JAYA	Housing estate developing plan area only
720 BEJI	PDAM Bogor	Low population density, Groundwater quantity, Already served by PDAM
<b>BEKASI</b>		
10 PONDOK GEDE (incl. JATISAMPRUNA)	PAM JAYA	Housing estate developing plan area only
11 JATIASIH	PAM JAYA	Housing estate developing plan area only
100 TARUMAJAYA	Private well / Water Terminal	Very Low population density
730 BEKASI BARAT	PDAM Bekasi	PDAM Bekasi is expanding service area
<b>TANGERANG</b>		
60 CIPUTAT	PAM JAYA	
61 PAMULANG	PAM JAYA	
70 PONDOK AREN	PAM JAYA	
160 TELUKNAGA	Water terminal / Private well	Low population density, Residential zone is located far from Jakarta
161 KOSAMBI	Water terminal / Private well	Low Population Density, Mainly Agricultural area, Residential zone in opposite side of Jakarta(Land use)
<b>Kotamadya TANGERANG</b>		
10 CILEDUG	PAM JAYA	
20 CIPONDOH	PAM JAYA	
50 BATU CEPER	PDAM Tangerang	Easier expansion of local PDAM's existing system which is now supplying to airport
60 BENDA	PDAM Tangerang	Easier expansion of local PDAM's existing system which is now supplying to airport

NOTE :

 : Kecamatan to be supplied by PAM JAYA.

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**ANNEX-35**

**ESTIMATION OF FUTURE  
WATER DEMAND**

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## 1. CATEGORY OF CONNECTION

Code	PAM JAYA CATEGORY	CATEGORY USED IN JICA STUDY	
<b>1</b>	<b>SOSIAL</b>	<b>SOCIAL</b>	
	<b>A. SOCIAL UMUM</b>	<b>A. PUBLIC SOCIAL</b>	
1A	Asrama Badan Sosial	Dormitory for social boards	Commercial & Services
1B	Rumah Yatim Piatu	Dormitory for orphan	Commercial & Services
1C	Tempat Ibadah	House of worship	Commercial & Services
	<b>B. SOCIAL KHUSUS</b>	<b>B. SPECIAL SOCIAL</b>	
1D	Rumah Sakit Pemerintah	Government hospital	Commercial & Services
<b>2</b>	<b>NON NIAGA</b>	<b>NON COMMERCIAL</b>	
	<b>A. RUMAH TANGGA</b>	<b>A. HOUSEHOLD</b>	
2A1	Rumah Tangga Sangat Sederhana	Very simple household	Domestic
2A2	Rumah Tangga Sederhana	Simple household	Domestic
2A3	Rumah Tangga Menengah	Middle-class household	Domestic
2A4	Rumah Tangga Mewah	Luxurious household	Domestic
2B	Kedutaan/Konsulat	Embassy/Consulate	Domestic
	<b>B. INSTANSI PEMERINTAH</b>	<b>B. GOVERNMENT INSTITUTE</b>	
2C	Kantor Inst. Pemerintah	Government's office	Commercial & Services
2D	Kantor Perwakilan Asing	Foreign agency's office	Commercial & Services
2E	Lembaga Swasta Non Komersial	Non commercial of private organization	Commercial & Services
2F	Inst. Perguruan/Kursus	School/Nondegree course	Commercial & Services
2G	Instansi/ABRI	Institution/Indonesian armed forces	Commercial & Services
<b>3</b>	<b>NIAGA</b>	<b>COMMERCIAL</b>	
	<b>NIAGA KECIL(A)</b>	<b>SMALL COMMERCIAL(A)</b>	
3A	Kios/Warung	Kiosk/Small shop	Commercial & Services
3B	Bengkel Kecil	Small workshop	Commercial & Services
3C	Usaha Kecil	Small venture	Commercial & Services
3D	Usaha Kecil Dalam, Rumah Tangga/Losmen	Home industry/Cheap hotel	Commercial & Services
3E	Tempat Pangkas Rambut	Barber	Commercial & Services
3F	Penjahit/Taylor	Seamstress/Taylor	Commercial & Services
	<b>NIAGA KECIL(B)</b>	<b>SMALL COMMERCIAL(B)</b>	
3G	Rumah Makan/Restoran Kecil	Small restaurant	Commercial & Services
3H	RS Swasta/Poliklinik/Laboratorium	Private hospital/Polyclinic/Laboratorium	Commercial & Services
3I	Praktek Dokter	Clinic	Commercial & Services
3J	Kantor Pengacara	Lawyer's office	Commercial & Services
3K	Hotel Melati(Non Bintang)	Non-star hotel	Commercial & Services
	<b>NIAGA BESAR(A)</b>	<b>BIG COMMERCIAL(A)</b>	
3L	Hotel Berbintang 1,2,3 dan Motel	1,2,3-stars hotel and Motel	
3M	Steam bath/Salon	Steam bath/Salon	Commercial & Services
3N	Night Club/Bar	Night club/Bar	Commercial & Services
3O	Bank	Bank	Commercial & Services
3P	Service Station(Bengkel Besar)	Service station(Big workshop)	Commercial & Services
3Q	Pers. Perdagangan/Niaga	Trading company	Commercial & Services
	<b>NIAGA BESAR(B)</b>	<b>BIG COMMERCIAL(B)</b>	
3R	Hotel Berbintang 4,5	4,5-stars hotel	Commercial & Services
3S	Gedung Bertingkat Tinggi & Kondominium	High-rising building & Condominium	Commercial & Services
<b>4</b>	<b>INDUSTRI</b>	<b>INDUSTRY</b>	
	<b>INDUSTRI KECIL</b>	<b>SMALL INDUSTRY</b>	
4A	<b>INDUSTRI BUSAR</b>	<b>BIG INDUSTRY</b>	
4B	Pabrik Es	Ice block factory	Industrial
4C	Pabrik Makanan/Minuman	Food & Beverage factory	Industrial
4D	Pabrik Kimia/Obat Kosmetik	Chemicals/Drugs/Cosmetics factory	Industrial
4E	Pabrik/Gudang Perindustrian	Factory/Storehouse of industry	Industrial
4F	Pabrik Tekstil	Textile factory	Industrial
4G	Pergudangan/Industri Lainnya	Warehouse/Other industries	Industrial
<b>5</b>	<b>KHUSUS</b>	<b>SPECIAL</b>	
5A	Hidran & Ledeng Umum	Hydrant & Public taps	Hydrant & Public taps
5B	Stasiun Air & Mobil Tangki	Water station & Water tank-car	Hydrant & Public taps
5C	Tongkang Air	Water tanker	Special
5D	BPP Tanjung Priok	BPP Tanjung Priok	Special
5E	BPP Ancol	BPP Ancol	Special
	<b>RUMAH SUSUN</b>	<b>FLAT</b>	
5F1	R Susun S Sederhana	Very simple flat	Domestic
5F2	R Susun Sederhana	Simple flat	Domestic
5F3	R Susun Menengah	Middle-class flat	Domestic
5F4	R Susun Mewah	Luxurious flat	Domestic

\*BPP : Board of port management

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2. Number of Connection

Category	94	95	Average										
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average
1A Axrma Badan Sosial	344	348	368	369	370	362	362	360	360	354	353	350	358
1B Rumah Yatim Piatu	167	165	169	170	169	163	162	162	162	162	161	161	164
1C Tempat Ibadah	1,729	1,764	1,791	1,807	1,827	1,775	1,795	1,807	1,819	1,824	1,828	1,836	1,801
1D RS Pemerintah	156	158	167	174	173	165	163	160	160	162	169	171	165
2A1 RT Sangat Sederhana	27,279	28,612	29,328	29,494	29,671	28,118	27,422	24,236	24,128	23,998	23,231	23,077	26,550
2A2 RT Sederhana	163,729	165,398	166,654	167,906	169,192	162,835	164,630	168,023	168,574	169,265	169,719	170,623	167,194
2A3 RT Menengah	71,947	72,294	72,529	72,946	73,175	73,572	74,001	74,834	75,012	75,223	75,903	76,363	75,984
2A4 RT Mewah	28,924	28,790	28,773	28,780	28,851	29,291	29,613	30,008	30,058	30,286	30,565	30,782	29,560
2B Kebutuhan/Konsultasi	3	3	3	3	3	2	3	3	3	3	3	4	3
2C Knt Inst Pemerintah	1,078	1,074	1,068	1,067	1,066	1,037	1,037	1,037	1,038	1,038	1,043	1,048	1,053
2D Xni Perwki Asing	116	115	114	114	114	112	114	110	110	110	111	113	111
2E Ldg Swst Non-Konsil	169	167	168	170	173	175	177	178	176	181	183	185	175
2F Ins/Prguan/Kursus	572	580	582	584	583	565	565	565	564	565	569	571	572
2G Instansi,ADRI	213	211	218	217	216	179	178	178	178	178	178	178	178
3A Kls/Warung	2,179	2,183	2,189	2,186	2,178	2,174	2,181	2,190	2,192	2,192	2,205	2,217	2,189
3B Bengkel Kecil	245	248	254	254	254	256	257	256	256	259	260	261	255
3C Usaha Kecil	254	340	410	358	411	515	562	608	649	691	790	840	536
3D Ush Ket Dlam RT/Loamen	12,656	12,642	12,555	12,584	12,580	12,437	12,405	12,422	12,411	12,406	12,415	12,257	12,481
3E Tempat Pangkas Rambut	99	101	102	104	106	106	105	108	110	110	111	112	106
3F Penjajit Taylor	743	754	773	785	798	808	820	902	926	936	938	989	849
3G Rnh Makan/Rest. Kecil	257	271	273	278	290	288	296	298	302	300	300	303	288
3H RS Swasta/Polik/Lab	259	267	268	266	269	261	265	266	266	266	266	266	265
3I Praktek Dokter	735	734	733	730	723	723	725	725	725	724	723	723	727
3J Kantor Pengacara	240	243	246	247	246	246	248	257	258	259	258	262	251
3K Hotel/Melati/Non Bini	43	44	43	44	43	43	44	44	44	44	45	45	44
3L Hl Bntang/23/Motel	113	114	115	118	118	118	118	117	115	113	114	113	116
3M Steam bath/Salon Kec	323	317	313	313	312	318	314	320	315	314	313	309	315
3N Nigh Club	50	50	51	52	52	52	52	52	52	52	52	53	52
3O Bank	371	369	374	375	378	380	383	384	384	383	386	392	380
3P Serv Station,Bangk Bar	190	187	184	185	184	179	180	178	177	177	179	180	182
3Q Pere Perdagangan/Niaga	20,049	20,126	20,262	20,319	20,370	20,688	20,754	21,030	21,028	21,118	21,186	21,582	20,709
3R Hl Bntang 45	18	18	18	18	18	18	19	20	21	22	22	22	20
3S Gt T' Tinggi, Condominium	70	72	71	72	75	76	83	88	90	90	92	93	81
4A Industri Kecil	123	133	134	136	140	143	146	146	144	144	144	144	140
4B IndB; Pabrik Ea	19	18	18	18	18	18	18	18	18	18	18	18	18
4C IndB; Pabrik Mkanan/Mnman	29	28	28	28	27	21	20	20	20	20	20	21	24
4D IndB; Pab Kimia/Obi/Kamt	13	13	13	13	13	13	13	13	14	14	14	15	13
4E IndB; Pab/Gud Perindirian	214	214	214	212	212	202	200	200	201	201	201	203	206
4F IndB; Pabrik Tekstil	3	3	3	3	3	3	3	3	3	3	3	3	3
4G IndB; Pabrik/Indir lain	492	488	487	483	487	459	461	459	463	469	472	472	474
5A Hidran&Ledeng Umum	1,995	1,976	1,961	1,942	1,934	1,932	1,915	1,918	1,919	1,900	1,889	1,879	1,930
5B Sias Air&Mbl Tangki	7	7	7	7	7	7	6	6	6	6	6	7	7
5C Tongkang Air	3	3	3	3	3	3	3	3	3	3	3	3	3
5D BPP Tanjung Priok	3	3	3	3	3	4	4	4	3	3	3	3	3
5E BPP Ancol	3	3	3	3	3	3	3	3	3	3	3	3	3
5F1 R Susun S Sederhana	1	1	1	1	1	1	1	1	1	1	1	1	1
5F2 R Susun Soderhana	1	1	1	1	2	1	1	1	1	1	1	1	1
5F3 R Susun Menengah	3	4	4	4	4	4	4	4	4	4	4	4	4
5F4 R Susun Mewah	2	2	2	2	2	2	2	2	2	2	2	2	2
Total	338,241	341,446	344,048	345,948	347,841	349,849	342,829	344,725	345,463	346,602	347,471	349,257	344,560

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3. Consumption

Category	95												Total
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
1A Asrama Badan Sosial	145,143	166,710	140,032	148,277	158,613	154,295	127,848	120,707	107,034	113,722	117,062	124,642	1,604,085
1B Rumah Yatim Piatu	14,695	16,525	19,262	17,721	17,306	17,774	17,336	17,202	14,653	12,849	15,565	15,935	196,823
1C Tempat ibadah	121,549	120,499	121,298	124,392	122,305	108,666	115,593	111,777	110,267	101,421	110,119	115,337	1,383,223
1D RS Pemerintah	369,439	364,857	365,143	339,597	362,145	344,811	342,355	346,059	332,558	361,495	336,402	360,916	4,224,777
2A1 RT Sangat Sederhana	645,202	663,368	685,972	693,615	717,524	664,850	700,395	596,710	569,201	552,137	583,804	597,784	7,660,562
2A2 RT Sederhana	3,637,681	3,545,161	3,647,744	3,725,542	3,829,031	3,446,325	3,799,756	3,528,214	3,440,115	3,103,920	3,492,693	3,644,087	42,840,269
2A3 RT Menengah	2,552,505	2,516,164	2,479,842	2,516,813	2,544,115	2,216,392	2,375,370	2,259,009	2,178,709	2,024,661	2,266,105	2,381,491	28,311,376
2A4 RT Mewah	1,179,318	1,170,669	1,178,694	1,212,528	1,203,660	1,150,529	1,247,006	1,166,988	1,093,370	1,092,666	1,156,530	1,203,235	14,007,193
2B Keduatan/Konsulat	35	557	527	423	407	586	1,227	915	1,041	1,143	1,129	1,127	9,217
2C Knt Inst Pemecintah	798,345	759,517	735,807	745,242	760,930	721,617	751,114	745,940	710,040	781,127	724,923	746,185	8,914,788
2D Knt Perwld Asing	19,612	21,426	18,226	20,782	23,400	16,762	17,066	17,746	15,001	11,653	13,931	14,664	210,269
2E Lgs Swst Non-Kemil	15,880	22,971	22,734	23,388	25,429	23,528	23,427	18,620	13,263	16,738	16,777	15,883	238,638
2F Inst/Grvan/Kursus	53,990	56,622	60,857	66,939	65,594	59,143	56,934	57,097	53,115	54,241	58,895	58,895	694,105
2G Instansi/ABRI	393,832	386,281	371,320	368,439	364,048	301,380	298,558	296,001	288,054	315,076	280,770	301,932	3,965,691
3A Kios/Warung	82,385	85,356	83,228	82,282	81,713	80,111	90,145	81,897	73,049	70,892	79,560	87,922	980,540
3B Bnggel Kecil	8,716	9,462	8,864	9,215	9,103	7,421	8,150	7,901	7,420	6,995	8,387	8,403	100,037
3C Usaha Kecil	4,351	7,121	8,815	8,865	12,080	14,191	14,944	14,292	14,222	14,511	19,704	22,063	155,159
3D Ush Kel Dlam RT/Asmen	373,658	366,120	368,757	376,426	381,945	358,533	384,228	355,241	327,344	306,752	345,184	346,588	4,290,776
3E Tempat Pangkas Rambut	2,861	2,688	2,765	2,765	2,666	2,970	3,495	3,620	2,954	2,831	2,931	3,188	36,803
3F Penjajal Taylor	20,600	21,055	21,683	22,884	22,583	21,770	23,603	23,020	24,769	21,332	24,673	26,515	276,487
3G Rmh Makan/Rest Kecil	14,275	15,651	15,051	15,427	18,206	19,374	19,826	17,323	18,013	14,047	15,781	16,601	199,575
3H RS Swasta/Polik/Lab	61,349	58,987	59,274	62,661	65,149	61,348	67,143	74,562	66,448	67,971	69,504	68,476	780,872
3I Praktek Dokter	18,865	19,267	19,202	19,924	18,989	17,449	19,116	18,084	17,284	16,596	17,437	18,537	220,750
3K Kantor Pengacara	28,331	29,136	30,922	33,248	22,968	22,563	23,634	23,916	22,352	22,878	21,581	24,469	305,998
3K Hotel Melati/Non Bini	10,474	12,109	11,889	12,416	11,931	10,863	14,418	12,352	13,035	10,497	13,151	14,641	147,776
3L Htl Biniang/123/Morel	85,269	83,612	93,415	98,291	94,590	90,304	90,861	77,323	87,617	93,935	90,636	102,315	1,088,188
3M Steamboat/Salon Kcc	13,634	12,858	13,104	12,515	12,237	11,745	12,775	12,167	11,775	11,625	10,484	10,484	146,086
3N Nigh Club	11,339	11,611	10,401	11,709	11,620	9,669	10,473	10,086	10,374	10,410	11,282	13,113	132,197
3O Bank	145,293	149,769	152,027	150,121	158,330	168,920	166,920	158,189	143,747	170,900	164,463	174,604	1,903,316
3P Serv Station/Bengk Bsr	14,131	12,572	12,572	14,844	13,614	12,431	13,959	12,820	12,027	10,661	10,656	11,288	151,244
3O Pers Peredangan/Niaga	925,809	896,912	890,907	919,197	943,193	882,267	945,459	909,060	830,974	860,342	940,399	997,099	10,941,658
3R Htl Biniang 45	306,777	312,893	291,139	289,139	314,072	297,377	308,831	304,988	282,808	307,764	300,524	350,246	3,666,558
3S Gid T Tinggi, Condominium	206,467	202,160	182,032	189,872	213,063	216,074	205,015	190,463	166,784	222,935	224,882	263,510	2,483,237
4A Industri Kecil	12,806	12,921	14,302	15,297	15,219	14,220	13,985	12,169	11,024	10,663	12,335	12,515	157,456
4B IndB; Pabrik Es	15,380	13,552	17,080	18,671	21,240	20,983	15,999	12,173	9,982	12,897	13,579	17,383	188,919
4C IndB; Pabrik Mknan/Mnman	24,800	21,213	26,879	25,877	23,325	12,365	12,411	11,714	9,572	11,812	12,818	11,181	203,967
4D IndB; Pab Kimia/Obr/Ksmi	2,382	2,701	3,028	3,395	3,279	3,363	2,850	3,249	2,045	2,656	3,352	3,103	35,403
4E IndB; Pab/Gud Perindtrian	65,150	70,251	70,194	70,696	71,625	84,906	74,298	78,747	52,459	62,035	62,950	65,825	829,136
4F IndB; Pabrik Tekstil	3,219	1,527	3,867	2,888	5,299	157	95	50	80	105	114	127	17,528
4G IndB; Prdngn/Indtr lain	288,003	300,657	297,874	282,633	299,120	294,033	267,172	284,762	235,906	276,223	280,884	310,547	3,417,814
5A Hidran&Ledeng Umum	782,004	792,453	814,033	835,809	899,120	786,642	851,083	739,044	635,012	665,629	724,066	784,896	9,294,435
5B Stas Air&Mbl, Tangki	87,795	88,914	88,382	91,830	97,256	96,139	98,127	86,880	78,993	100,828	117,145	129,538	1,161,827
5C Tongkang Air	6,226	7,458	8,295	4,540	4,489	4,955	4,076	2,261	0	0	0	0	42,300
5D BPP Tanjung Priok	87,898	81,594	83,694	71,053	34,550	45,436	75,378	64,232	39,197	68,965	45,633	46,877	744,999
5E BPP Ancol	373,567	432,902	390,913	369,914	349,416	337,778	357,609	244,132	315,735	351,181	328,181	329,579	4,180,707
5F R Susun S Sederhana	185,500	175,719	171,930	191,980	179,980	474	800	1,154	815,375	1,133	6,467	5,848	921,596
5F2 R Susun Sederhana	1,505	1,856	2,133	2,565	1,908	1,819	1,773	1,784	1,614	1,496	1,644	1,729	21,786
5F3 R Susun Menengah	62,404	62,414	61,385	64,233	62,389	60,544	62,337	61,608	64,224	70,754	60,402	66,021	758,715
5F4 R Susun Mewah	47,917	45,425	48,480	44,090	56,100	17,304	13,974	20,350	19,486	20,904	17,512	18,688	370,232
Total	14,267,386	14,226,203	14,230,226	14,430,209	14,723,395	13,293,291	14,148,287	13,204,590	12,533,121	12,392,460	13,229,593	13,935,832	164,614,593

(m<sup>3</sup>)

## 4. PAMJAYA DATA : SUMMARY

## Number of Connection

Category	90		91		92		93	
	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec
1A SOSIAL UMUM	2,639	2,757	3,155	3,367	3,541	3,712	3,784	3,854
1B SOSIAL KHUSUS	421	474	419	430	441	462	475	607
2A RUMAH TANGGA	181,112	196,671	212,931	231,676	243,020	260,436	270,196	284,856
2B NON NIAGA	1,565	1,575	1,648	1,735	1,810	1,895	1,956	2,039
3A NIAGA KECIL	10,664	11,643	11,780	13,080	14,273	15,237	15,495	16,355
3B NIAGA BESAR	13,666	13,563	15,184	16,045	17,014	18,183	19,469	20,536
4A INDUSTRI KECIL	31	37	37	41	44	53	63	67
4B INDUSTRI BESAR	601	622	679	690	694	716	740	747
5A KHUSUS	7	8	5	5	5	5	5	5
5B RUMAH SUSUN	16	16	18	20	21	27	29	32
Total	210,722	227,771	245,856	267,093	280,863	300,776	312,211	329,158

## Consumption

Category	90		91		92		93	
	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec
1A SOSIAL UMUM	1,002,759	1,010,339	1,020,324	1,012,296	957,443	996,830	1,118,647	1,119,745
1B SOSIAL KHUSUS	349,412	361,833	493,053	473,746	492,284	612,339	573,745	1,076,454
2A RUMAH TANGGA	5,621,666	6,249,121	6,413,195	6,726,288	6,733,225	7,285,644	7,638,900	7,473,803
2B NON NIAGA	1,135,211	1,039,270	1,049,529	1,124,301	1,153,428	1,189,356	1,218,516	1,206,356
3A NIAGA KECIL	389,485	445,703	453,388	529,555	491,619	541,560	576,193	593,874
3B NIAGA BESAR	1,165,844	1,261,245	1,328,642	1,403,113	1,378,873	1,425,554	1,575,176	1,116,158
4A INDUSTRI KECIL	6,604	9,318	7,727	8,751	7,943	9,453	9,272	6,828
4B INDUSTRI BESAR	244,587	255,431	247,222	272,646	285,657	322,751	352,016	481,649
5A KHUSUS	320,864	358,173	431,274	408,489	384,534	346,978	456,930	541,006
5B RUMAH SUSUN	101,474	104,644	142,824	175,801	173,281	239,271	229,611	263,133
Total	10,337,906	11,105,077	11,587,179	12,134,986	12,058,287	12,969,736	13,749,006	13,879,006

## Payment

Category	90		91		92		93	
	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec
1A SOSIAL UMUM	207,136,640	206,371,690	169,291,300	275,734,500	262,665,050	249,207,500	279,561,750	279,936,250
1B SOSIAL KHUSUS	185,959,750	192,380,910	263,876,950	328,697,725	341,926,875	423,379,775	396,256,800	965,331,750
2A RUMAH TANGGA	2,754,735,550	3,063,616,660	3,099,771,920	4,807,141,500	4,802,163,150	4,836,716,200	5,060,033,800	4,649,395,850
2B NON NIAGA	1,221,154,425	1,114,176,355	1,124,935,825	1,535,493,525	1,578,083,850	1,617,001,500	1,648,949,220	1,637,424,525
3A NIAGA KECIL	371,646,000	424,906,900	432,746,600	724,255,780	651,702,520	697,687,200	741,853,640	755,660,640
3B NIAGA BESAR	1,596,375,500	1,726,384,300	1,819,727,850	2,698,755,800	2,651,640,900	2,705,571,400	2,305,897,237	2,018,715,600
4A INDUSTRI KECIL	8,033,400	11,249,770	9,293,550	15,839,660	14,221,940	16,726,140	16,110,515	11,614,800
4B INDUSTRI BESAR	403,053,200	420,616,070	406,555,830	667,227,260	699,749,100	788,695,380	848,071,022	1,282,729,270
5A KHUSUS	416,897,433	460,351,865	535,719,803	669,028,674	622,008,902	1,013,061,200	1,071,658,830	958,263,910
5B RUMAH SUSUN	43,056,080	44,416,430	61,878,940	124,534,550	120,343,750	167,657,750	148,715,645	187,530,150
Total	7,208,047,978	7,664,470,950	7,923,798,568	11,846,708,974	11,744,506,037	12,515,704,045	12,517,118,450	12,756,602,745

## Average Consumption per Connection

Category	90		91		92		93	
	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec
1A SOSIAL UMUM	380	366	323	301	270	269	296	290
1B SOSIAL KHUSUS	830	763	1,177	1,102	1,116	1,325	1,208	1,773
2A RUMAH TANGGA	31	32	30	29	28	28	28	26
2B NON NIAGA	725	660	637	648	637	628	623	592
3A NIAGA KECIL	37	38	38	40	34	36	37	36
3B NIAGA BESAR	85	90	88	87	81	78	81	54
4A INDUSTRI KECIL	213	252	209	213	181	178	147	102
4B INDUSTRI BESAR	407	411	364	395	412	451	476	645
5A KHUSUS	45,838	46,022	86,255	81,698	76,907	69,396	91,356	108,201
5B RUMAH SUSUN	6,342	6,540	7,935	8,790	8,251	8,862	7,918	8,223

## Average Payment per Connection

Category	90		91		92		93	
	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec
1A SOSIAL UMUM	78,491	74,854	53,658	81,893	74,178	67,136	73,880	72,447
1B SOSIAL KHUSUS	441,710	405,867	629,778	764,413	775,344	916,406	834,225	1,590,332
2A RUMAH TANGGA	15,210	15,577	14,558	20,749	19,760	18,568	18,727	16,321
2B NON NIAGA	780,290	707,414	682,607	684,501	871,870	853,299	843,021	803,053
3A NIAGA KECIL	34,851	36,479	36,736	55,371	45,660	45,789	47,878	46,091
3B NIAGA BESAR	116,814	123,640	119,845	168,199	155,851	148,797	118,446	98,301
4A INDUSTRI KECIL	259,142	304,048	251,177	386,333	323,226	315,588	255,722	173,355
4B INDUSTRI BESAR	670,638	676,232	598,757	966,995	1,008,284	1,101,530	1,146,042	1,717,174
5A KHUSUS	59,556,776	57,543,983	107,143,961	133,805,735	124,401,780	202,612,240	214,331,765	193,652,782
5B RUMAH SUSUN	2,691,005	2,776,027	3,437,719	6,226,728	5,730,655	6,209,546	5,128,126	5,860,317

## 5. PAM JAYA DATA : SUMMARY BY MAJOR CATEGORY

## Number of Connection

Category	90		91		92		93		94	
	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec
1 Domestic	181,128	196,687	212,949	231,696	243,041	260,513	270,225	284,898	290,119	293,825
2 Hydrant & Public Taps	1,204	1,260	1,437	1,532	1,611	1,689	1,722	1,763	2,012	1,939
3 Commercial & Service	27,746	29,153	30,745	33,121	35,464	37,796	39,451	41,672	43,052	44,219
4 Industrial	632	659	716	731	738	769	803	814	893	857
5 Special	11	13	9	9	9	10	10	11	9	9
Total	210,722	227,771	245,856	267,090	280,863	300,776	312,211	329,158	336,085	340,849

## Consumption

Category	90		91		92		93		94	
	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec
1 Domestic	5,723,140	6,353,765	6,556,020	6,902,069	6,906,506	7,524,915	7,868,511	7,736,936	8,562,156	7,558,925
2 Hydrant & Public Taps	815,418	823,636	858,581	848,586	811,887	866,245	943,285	1,054,667	900,277	682,781
3 Commercial & Service	3,223,799	3,291,136	3,481,425	3,689,688	3,656,837	3,893,270	4,108,254	4,047,156	4,235,776	4,033,389
4 Industrial	251,191	264,749	254,949	281,397	293,600	332,204	361,288	488,477	411,014	430,027
5 Special	324,358	371,791	436,205	413,226	389,457	353,101	462,667	551,771	483,306	358,169
Total	10,337,906	11,105,077	11,587,179	12,134,966	12,058,287	12,969,736	13,749,006	13,879,006	14,592,529	13,293,291

## Consumption

Category	90		91		92		93		94	
	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec
1 Domestic	5,723	6,354	6,556	6,902	6,907	7,525	7,869	7,737	8,562	7,559
2 Hydrant & Public Taps	815	824	859	849	812	866	948	1,055	900	883
3 Commercial & Service	3,224	3,291	3,481	3,690	3,657	3,893	4,108	4,047	4,236	4,033
4 Industrial	251	265	255	281	294	332	361	488	411	430
5 Special	324	372	436	413	389	353	463	552	483	388
Total	10,338	11,105	11,587	12,135	12,058	12,970	13,749	13,879	14,593	13,293

## Daily Unit Consumption

Category	90		91		92		93		94	
	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec
1 Domestic	1.02	1.08	0.99	0.99	0.92	0.95	0.94	0.91	0.95	0.86
2 Hydrant & Public Taps	21.84	21.80	19.28	18.46	16.26	17.10	17.77	19.94	14.43	15.18
3 Commercial & Service	3.75	3.76	3.65	3.71	3.33	3.43	3.36	3.24	3.17	3.04
4 Industrial	12.82	13.39	11.49	12.83	12.83	14.40	14.51	20.00	14.85	16.73
5 Special	933.38	972.77	1,531.13	1,481.10	1,335.08	1,223.50	1,530.74	1,661.46	1,732.28	1,437.66
Average	1.58	1.63	1.52	1.51	1.38	1.44	1.42	1.41	1.40	1.30
Days	31	30	31	30	31	30	31	30	31	30

## Percentage of Connection by Category

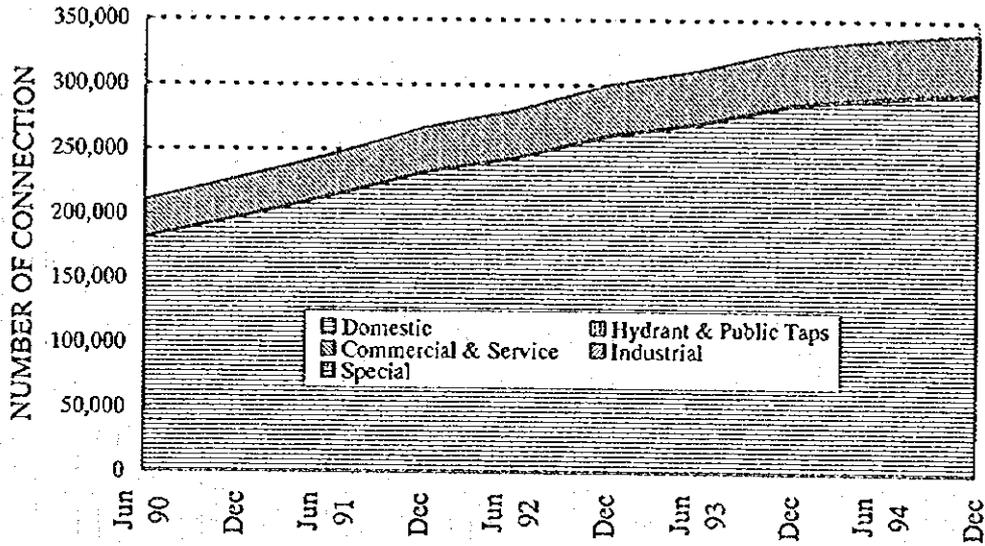
Category	90		91		92		93		94	
	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec
1 Domestic	85.96	86.35	86.62	86.75	86.53	86.61	86.55	86.55	86.32	86.20
2 Hydrant & Public Taps	0.57	0.55	0.58	0.57	0.57	0.56	0.55	0.54	0.60	0.57
3 Commercial & Service	13.17	12.80	12.51	12.40	12.63	12.57	12.64	12.66	12.81	12.97
4 Industrial	0.30	0.29	0.29	0.27	0.26	0.26	0.26	0.25	0.27	0.25
5 Special	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

## Percentage of Consumption by Category

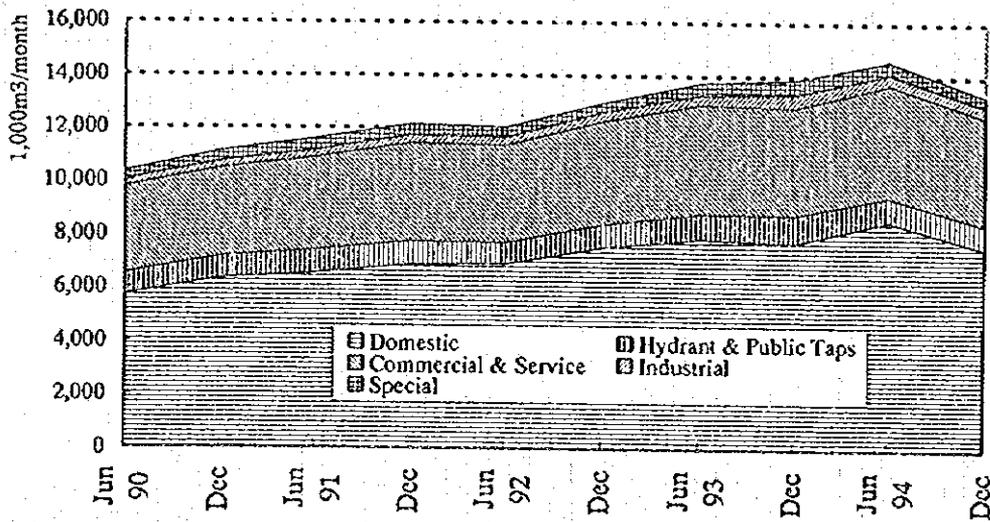
Category	90		91		92		93		94	
	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec
1 Domestic	55.36	57.21	56.58	56.88	57.28	58.02	57.23	55.75	58.67	56.86
2 Hydrant & Public Taps	7.89	7.42	7.41	6.99	6.73	6.68	6.90	7.60	6.17	6.64
3 Commercial & Service	31.18	29.64	30.05	30.41	30.33	30.02	29.88	29.16	29.03	30.34
4 Industrial	2.43	2.38	2.20	2.32	2.43	2.56	2.63	3.52	2.82	3.23
5 Special	3.14	3.35	3.76	3.41	3.23	2.72	3.37	3.98	3.31	2.92

6. FIGURE OF NUMBER OF CONNECTION AND WATER CONSUMPTION BY CATEGORY

NUMBER OF CONNECTIONS BY CATEGORY

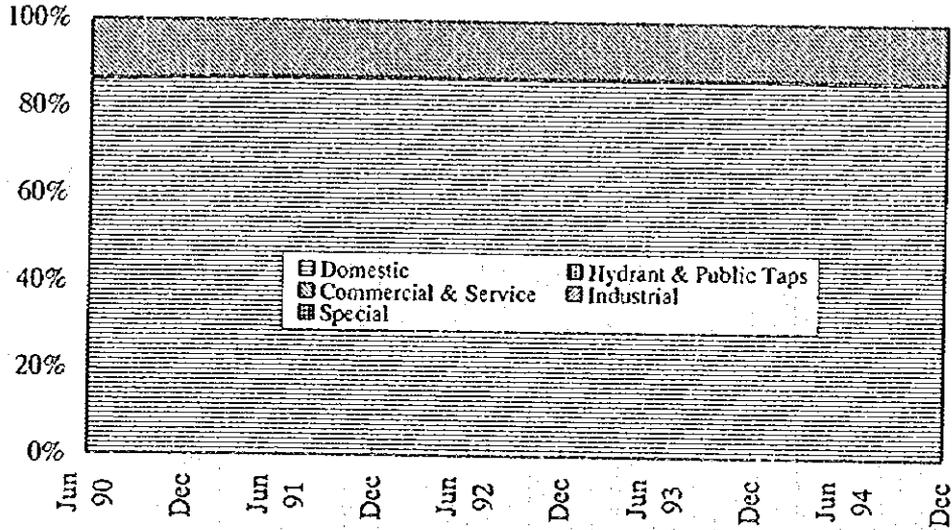


WATER CONSUMPTION BY CATEGORY

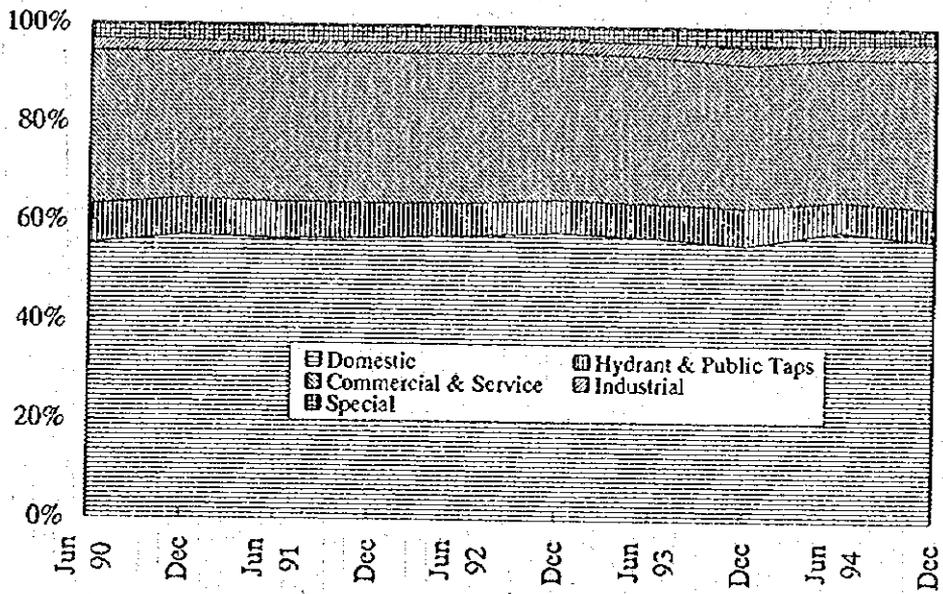


7. FIGURE OF PERCENTAGE OF CONNECTION AND CONSUMPTION BY CATEGORY

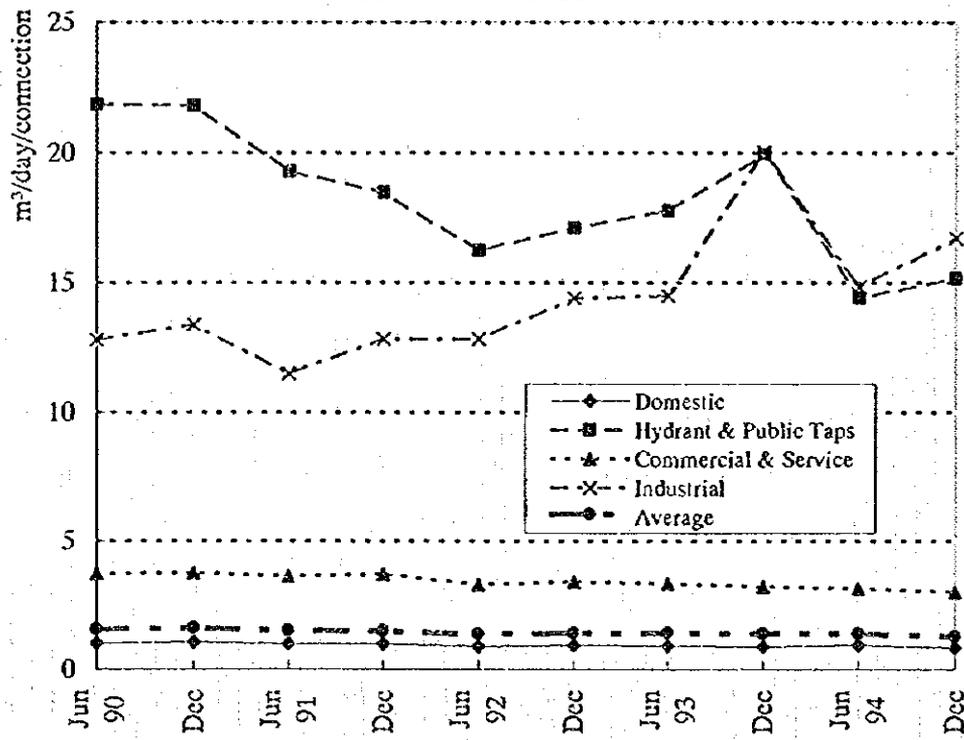
PERCENTAGE OF CONNECTION BY CATEGORY



PERCENTAGE OF CONSUMPTION BY CATEGORY



## 8. UNIT CONSUMPTION



Note : Special category is excluded

9. PAM JAYA MONTHLY DATA

Number of Connection

Category	95												Average
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
1 Domestic	291,889	294,895	297,295	299,138	300,891	293,825	295,676	297,111	297,782	298,792	299,429	300,859	297,299
2 Hydrant & Public Taps	2,002	1,983	1,968	1,949	1,941	1,939	1,921	1,924	1,925	1,906	1,895	1,886	1,937
3 Commercial & Service	43,448	43,662	43,879	43,960	44,101	44,219	44,364	44,824	44,888	45,030	45,270	45,631	44,440
4 Industrial	893	897	897	893	900	857	859	857	862	868	871	875	877
5 Special	9	9	9	9	8	9	9	9	6	6	6	6	8
Total	338,241	341,446	344,048	345,948	347,841	340,849	342,829	344,725	345,463	346,602	347,471	349,257	344,560

Water Consumption

Category	95												Total	Average (m <sup>3</sup> /day)
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun		
1 Domestic	8,312,067	8,181,313	8,276,687	8,451,789	8,596,894	7,558,925	8,202,838	7,636,732	7,368,591	6,818,814	7,586,286	7,910,010	94,900,946	260,003
2 Hydrant & Public Taps	869,799	881,367	902,415	927,639	991,020	882,781	949,210	815,924	714,005	766,457	841,211	914,434	10,456,262	28,647
3 Commercial & Service	4,206,089	4,218,747	4,134,998	4,185,817	4,307,919	4,033,389	4,172,366	4,038,453	3,774,525	4,010,652	4,042,250	4,314,451	49,439,656	135,451
4 Industrial	411,740	422,822	433,224	419,457	439,107	430,027	386,810	402,864	321,068	376,391	386,032	420,681	4,850,223	13,288
5 Special	467,691	521,954	482,902	445,507	388,455	388,169	437,063	310,617	354,932	420,146	373,814	376,256	4,967,506	13,610
Total	14,267,386	14,226,203	14,230,226	14,430,209	14,723,995	13,293,291	14,148,287	13,204,590	12,533,121	12,392,460	13,229,593	13,935,832	164,614,593	450,999

Unit Consumption

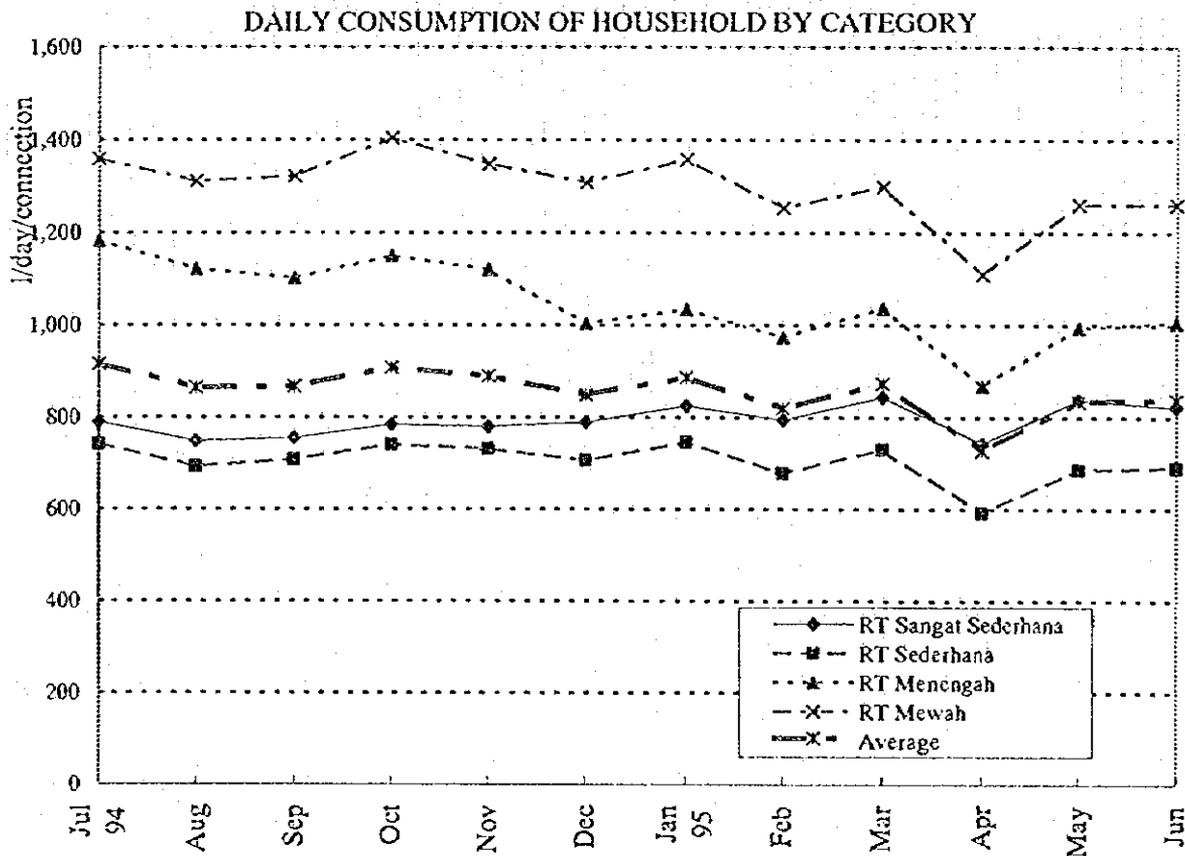
Category	95												Average (m <sup>3</sup> /day)
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
1 Domestic	0.95	0.89	0.90	0.94	0.92	0.86	0.89	0.83	0.88	0.74	0.84	0.85	0.87
2 Hydrant & Public Taps	14.48	14.34	14.79	15.87	16.47	15.18	15.94	13.68	13.25	12.97	14.80	15.64	14.78
3 Commercial & Service	3.23	3.12	3.04	3.17	3.15	3.04	3.03	2.91	3.00	2.87	2.98	3.05	3.05
4 Industrial	15.37	15.21	15.58	15.66	15.74	16.73	14.53	15.16	13.30	13.99	14.77	15.51	15.13
5 Special	1,732.19	1,870.80	1,730.83	1,856.28	1,566.35	1,437.66	1,566.53	1,113.32	2,112.69	2,258.85	2,076.74	2,022.88	1,778.76
Average	1.41	1.34	1.33	1.39	1.37	1.30	1.33	1.24	1.30	1.15	1.27	1.29	1.31
Days	30	31	31	30	31	30	31	31	28	31	30	31	365

## 10. DAILY WATER CONSUMPTION

DAILY UNIT CONSUMPTION OF HOUSEHOLD by CATEGORY

Category	94						95						Average	
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	(l/day)	(l/c/d)
2A1 RT Sangat Sederha	788	748	755	784	780	788	824	794	843	742	838	822	791	144
2A2 RT Sederhana	741	692	706	740	730	705	745	677	729	592	686	689	702	128
2A3 RT Menengah	1,183	1,123	1,103	1,150	1,122	1,004	1,036	974	1,037	868	995	1,006	1,048	191
2A4 RT Mewah	1,359	1,312	1,321	1,404	1,348	1,309	1,358	1,254	1,299	1,111	1,261	1,261	1,298	236
Average	915	864	867	908	889	848	886	820	873	726	835	838	855	156
Days	30	31	31	30	31	30	31	31	28	31	30	31	365	

\*5.5 persons/connection



### LCD of HOUSEHOLD by CATEGORY

Category	Daily Consumption Persons/Connection (l/day)	L/C/D	Connection (%)
2A1 RT Sangat Sederhana	791	4.7	9
2A2 RT Sederhana	702	4.7	56
2A3 RT Menengah	1,048	4.7	25
2A4 RT Mewah	1,298	4.7	10
Average	855	4.7	100

Note : Figures are based on average of July 1994 - June 1995

## 11. EXPLANATION OF DOMESTIC PER CAPITA CONSUMPTION

### Domestic Per Capita Consumption

As a basic figure of domestic water consumption, per capita consumption is calculated as follows.

Table-1 shows the current per capita consumption calculated from data provided from PAM Jaya. The data of person per household is derived from the results of questionnaire survey.

Table-1 CURRENT PER CAPITA CONSUMPTION

HOUSE CATEGORY	PERSON PER HOUSEHOLD	NUMBER OF CONNECTION	TOTAL CONSUMPTION (m <sup>3</sup> /year)	PER CAPITA CONSUMP. (lpcd)
Luxurious	6.4	29,560	14,007,193	203
Middle	5.6	73,984	28,311,376	187
Simple	5.4	167,194	42,840,269	130
Very Simple	4.4	26,550	7,660,562	180
Total/Average	5.5	297,288	92,819,400	156

In the above table, per capita consumption for house category Very Simple is almost same as the category Middle. It is considered that the service ratio for Very Simple is rather low, therefore, people live in very simple house are sharing water among neighborhood and hence the per capita consumption for Very Simple shows bigger amount. Per capita consumption, therefore, modified based on the data of per capita consumption 100 lpcd which was obtained from the results of questionnaire survey as shown on the Table-2.

**Table -2 MODIFIED CURRENT PER CAPITA CONSUMPTION**

HOUSE CATEGORY	PERSON PER HOUSEHOLD	PER CAPITA CONSUMP. (lpcd)
Luxurious	6.4	203
Middle	5.6	187
Simple	5.4	130
Very Simple	7.9	100
Total/Average	5.8	147

Table-2 shows the net per capita consumption for PAM Jaya water supply. To estimate potential water demand, it is necessary to add amount of groundwater usage to the above per capita consumption.

According to the results of questionnaire survey, 18.4 % of PAM Jaya customer also use own shallow well. Proportion of PAM Jaya water usage is 76 % of total water consumption. Therefore, factor of additional groundwater will be calculated as follows:

$$(1-0.184) + (0.184/0.76) = 1.05811 : \text{Factor for groundwater usage}$$

Per capita consumption including groundwater usage is calculated from per capita consumption in Table-2 times Factor for groundwater usage and the results are shown on Table-3.

**Table-3 PER CAPITA CONSUMPTION INCLUDING GROUNDWATER USAGE**

HOUSE CATEGORY	PERSON PER HOUSEHOLD	PER CAPITA CONSUMP. (lpcd)
Luxurious	6.4	215
Middle	5.6	198
Simple	5.4	138
Very Simple	7.9	106
Total/Average	5.8	156

Based on the current per capita consumption including groundwater usage, future per capita consumption in year 2019 is estimated as shown on Table-4. Per capita consumption which were employed in JWRMS and JWSSP are also shown on the same table.

**Table-4 FUTURE PER CAPITA CONSUMPTION**

HOUSE CATEGORY	PER CAPITA CONSUMP. IN 2019 (lpcd)	JWRMS IN 2010 (lpcd)	JWSSP IN 2010 (lpcd)
Luxurious	250	200	223
Middle	250	200	223
Simple	150	150	157
Very Simple	100	100	103
Average	185		

Based on the average per capita consumption 156 lpcd in 1995 and 185 lpcd in 2019, average per capita consumption in each year is estimated as shown on Table-5.

**Table-5 FUTURE AVERAGE PER CAPITA CONSUMPTION**

YEAR	PER CAPITA CONSUMPTION (lpcd)
1995	156
2000	162
2005	168
2010	174
2015	180
2019	185

Per capita consumption for person who is depending on only groundwater is estimated 120 lpcd. Majority of groundwater user are categorized in Simple and Very Simple

according to the results of questionnaire survey. Per capita consumption for PAM Jaya which is shown on Table-2 for these categories are 130 lpcd and 100 lpcd. Therefore, per capita consumption for groundwater user is estimated as 120 lpcd.