6	Nabire area	Agriculture	Nabire
7	KS Fak_Fak	Agriculture	Fak-fak

2.4.3 Next Five Years Development Plan (Repelita VI)

Repelita VI will start on 1st April 1994 and close 31st March 1999. For this mid-term development plan, each province select priority program and development sectors from long term development plan which conspectus in afore section. 18 out of 27 provinces give development priority to the agriculture sector for this Repelita V. Following table shows those provinces.

Province which has priority agriculture sector or not

Province which has priority agriculture sector		Other than agriculture sector
D.I Aceh	NTB	Suamtera Barat
Sumatra Utara	Kalimantan Barat	Jambi
Riau	Kalimantan Tengah	Sumatera Selatan
Lampung	Sulawesi Utara	Bengkulu
Jawa Barat	Sulawesi Tengah	DKI Jakarta
Jawa Tengah	Sulawesi Selatan	NTT
Tawa Timur	Sulawesi Tenggara	Timor Timur
D.I Jogyakarta	Maluku	Kalimantan Selatan
Bali	Irian Jaya	Kalimantan Timur

Source : Table 2.25

Table 2.25 present all priority program and prospective sectors during Repelita VI for each province.

Table 2.1 Area and Population by Province

	Province	Area (km2)	Areal Percentage (%)	Population Urban	Population Rural	Population Total	Urbanization Percentage(%)	Population Percentage (%)	Population Density (Person/km2)
11	D.I.Aceh	55,392	2.89	539,740	2,875,653	3,415,393	15.80	1.91	61.7
12	Sumatera Utara	70,787	3.69	3,638,832	6,613,479	10,252,311	35.49	5.72	144.8
13	Sumatera Barat	49,778	2.59	807,983	3,190,694	3,998,677	20.21	2.23	80.3
14	Riau	94,561	4.93	1,047,454	2,233,592	3,281,046	31.92	1.83	34.7
15	Jambi	44,800	2.33	432,727	1,581,327	2,014,054	21.49	1.12	45.0
16	Sumatera Selatan	103,688	5.40	1,837,492	4,438,453	6,275,945	29.28	3.50	60.5
17	Bengkulu	21,168	1.10	240,192	938,759	1,178,951	20.37	0.66	55.7
18	Lampung	33,307	1.74	747,327	5,256,782	6,004,109	12.45	3.35	180.3
	SUMATERA	**473,481**	**24.67**	**9,291,747**	**27,128,739**	**36,420,486**	**25.51**	**20.32**	**76.9**
31	D.K.I.Jakarta	590	0.03	8,222,515	0	8,222,515	100.00	4.59	13936.5
32	Jawa Barat	46,300	2.41	12,208,176	23,170,307	35,378,483	34.51	19.74	764.1
33	Jawa Tengah	34,206	1.78	7,694,539	20,822,247	28,516,786	26.98	15.91	833.7
34	D.I.Yogyakarta	3,169	0.17	1,294,056	1,618,555	2,912,611	44.43	1.63	919.1
35	Jawa Timur	47,921	2.50	8,916,011	23,571,557	32,487,568	27.44	18.13	677.9
	JAWA	**132,186**	**6.89**	**38,335,297**	**69,182,666**	**107,517,963**	**35.65**	**60.00**	**813.4**
51	Bali	5,561	0.29	734,237	2,043,119	2,777,356	26.44	1.55	499.4
52	Nusa Tenggara Barat	20,177	1.05	582,180	2,786,519	3,368,699	17.28	1.88	167.0
53	Nusa Tenggara Timur	47,876	2.49	372,242	2,895,677	3,267,919	11.39	1.82	68.3
54	Timor Timur	14,874	0.77	58,221	689,336	747,557	7.79	0.42	50.3
	BALI, NUSA TENGGARA & TIMOR	**88,488**	**4.61**	**1,746,880**	**8,414,651**	**10,161,531**	**17.19**	**5.67**	**114.8**
61	Kalimantan Barat	146,760	7.65	642,989	2,592,377	3,235,366	19.87	1.81	22.0
62	Kalimantan Tengah	152,600	7.95	245,249	1,150,612	1,395,861	17.57	0.78	9.1
63	Kalimantan Selatan	37,660	1.96	702,950	1,893,697	2,596,647	27.07	1.45	68.9
64	Kalimantan Timur	202,440	10.55	915,469	959,563	1,875,032	48.82	1.05	9.3
	KALIMANTAN	**539,460**	**28.11**	**2,506,657**	**6,596,249**	**9,102,906**	**27.54**	**5.08**	**16.9**
71	Sulawesi Utara	19,023	0.99	564,795	1,913,151	2,477,946	22.79	1.38	130.3
72	Sulawesi Tengah	69,726	3.63	281,134	1,422,196	1,703,330	16.50	0.95	24.4
73	Sulawesi Selatan	72,781	3.79	1,685,443	5,295,146	6,980,589	24.14	3.90	95.9
74	Sulawesi Tenggara	27,686	1.44	229,649	1,119,649	1,349,298	17.02	0.75	48.7
	SULAWESI	**189,216**	**9.86**	**2,761,021**	**9,750,142**	**12,511,163**	**22.07**	**6.98**	**66.1**
81	Maluku	74,505	3.88	352,438	1,498,649	1,851,087	19.04	1.03	24.8
82	Irian Jaya	421,981	21.99	395,131	1,233,956	1,629,087	24.25	0.91	3.9
	MALUKU & IRIAN JAYA	**496,486**	**25.87**	**747,569**	**2,732,605**	**3,480,174**	**21.48**	**1.94**	**7.0**
	WHOLE INDONESIA	**1,919,317**	**100.00**	**55,389,171**	**123,805,052**	**179,194,223**	**30.91**	**100.00**	**93.4**

Source: Penduduk Indonesia, Hasil Sensus Penduduk 1990; Biro Pusat Statistik
Statistik Indonesia 1991; Biro Pusat Statistik

Table 2.2 Present Land Use in Indonesia by Province

Unit : km2

Code	Province	Lowland Paddy Field	Arable Upland	Grass and Fallow Land	Swamp/ Water	Estates	House Compound	Forest /Wood /Bush	Total Area
		A	B	C	D	E	F	G	H
		*1	*2	*2	*3	*2	*2	*4	*2
SUMATERA									
11	D.I. Aceh	3,231	5,310	4,187	1,346	4,702	2,876	33,740	55,392
12	Sumatera Utara	5,417	7,414	6,394	3,161	13,469	2,387	32,544	70,787
13	Sumatera Barat	2,222	4,265	2,155	762	3,137	1,045	36,192	49,778
14	Riau	2,119	6,587	4,118	5,165	10,428	3,721	62,424	94,561
15	Jambi	2,128	4,573	2,655	1,033	11,431	1,645	21,335	44,800
16	Sumatera Selatan	4,580	6,953	10,323	13,124	9,989	3,181	55,539	103,688
17	Bengkulu	715	1,276	1,831	498	1,958	421	14,469	21,168
18	Lampung	2,157	7,143	3,224	1,109	4,755	2,202	12,719	33,307
	Sub-total	**22,569**	**43,521**	**34,886**	**26,198**	**59,869**	**17,477**	**268,961**	**473,481**
J A W A									
31	D.K.I. Jakarta	122	56	11	4	0	330	67	590
32	Jawa Barat	11,946	10,291	1,190	931	4,154	4,129	13,660	46,300
33	Jawa Tengah	11,239	7,907	79	498	823	5,610	8,051	34,206
34	Yoguyakarta	728	1,154	27	12	0	846	403	3,169
35	Jawa Timur	11,713	11,951	208	983	1,676	5,678	15,712	47,921
	Sub-total	**35,748**	**31,358**	**1,515**	**2,428**	**6,654**	**16,593**	**37,891**	**132,186**
BALI, NUSA TENGGARA, TIMOR TUMUR									
51	Bali	941	1,277	21	35	1,309	334	1,645	5,561
52	N.T.B.	1,972	2,042	1,393	20	226	260	14,264	20,177
53	N.T.T.	1,186	5,817	15,464	129	2,137	1,499	21,644	47,876
54	Timor Timur *5	323	1,061	3,539	99	259	119	9,474	14,874
	Sub-total	**4,422**	**10,196**	**20,417**	**284**	**3,930**	**2,212**	**47,027**	**88,488**
KALIMANTAN									
61	Kalimantan Barat	4,312	10,002	9,952	5,389	10,193	2,953	103,959	146,760
62	Kalimantan Tengah	2,222	2,909	4,904	2,405	6,418	1,004	132,739	152,600
63	Kalimantan Selatan	4,670	2,844	3,984	2,766	2,495	1,220	19,681	37,660
64	Kalimantan Timur	1,616	6,500	12,169	10,925	2,880	1,313	167,037	202,440
	Sub-total	**12,820**	**22,255**	**31,009**	**21,484**	**21,986**	**6,491**	**423,415**	**539,460**
SULAWESI									
71	Sulawesi Utara	667	3,482	1,615	289	2,464	854	9,651	19,023
72	Sulawesi Tengah	1,184	2,676	4,801	666	6,685	631	53,083	69,726
73	Sulawesi Selatan	5,893	6,334	5,703	1,925	3,616	1,483	47,827	72,781
74	Sulawesi Tenggara	570	2,796	4,435	649	3,691	1,163	14,382	27,686
	Sub-total	**8,314**	**15,288**	**16,554**	**3,530**	**16,456**	**4,131**	**124,944**	**189,216**
MALUKU AND IRIAN JAYA									
81	Maluku	33	5,732	3,992	341	6,525	2,138	55,744	74,505
82	Irian Jaya	89	3,816	14,936	20,569	2,037	743	379,791	421,981
	Sub-total	**122**	**9,547**	**18,928**	**20,910**	**8,562**	**2,882**	**435,536**	**496,486**
	Grand Total	**83,995**	**132,166**	**123,308**	**74,833**	**117,457**	**49,785**	**1,337,773**	**1,919,317**

Note: *1 : Team's estimate
*2 : Central Bureau of Statistics
*3 : Central Bureau of Statistics, RePPProT
*4 : G = H - (A+B+C+D+E+F)
*5 : RePPProT

Source: Agricultural Survey, Land Area by Utilization in Java, 1990; Central Bureau of Statistics.
Agricultural Survey, Land Area by Utilization in Outer Java, 1990; Central Bureau of Statistics.
Statistik Indonesia, 1991
RePPProT,1990

Note on difinitions

Lowland Paddy Field	: paddy field including swamp paddy field
Arable Upland	: seasonal crop land and yard around the house
Grass and Fallow Land	: grazing land and idle land for more than one year
Swamp/ Water	: swamps, water body and fish pond
Estates	: comercial crop land for rubber, oil palm, coconut etc.
House Compound	: land for building and surrounding area with fence
Forest /Wood /Bush	: forest and other land

Table 2.3 Comparison of GRDP between 1983 and 1989 by Sector at 1983 Constant Prices

INDUSTRIAL ORIGIN	1983		1989		Growth Rate (%)
	(Million Rp.)	(%)	(Million Rp.)	(%)	
1. AGRICULTURE	16,118,109	22.76	22,184,870	21.29	5.5
a. Farm food crops	9,841,726	13.90	13,210,841	12.68	5.0
b. Farm nonfood crops	2,055,642	2.90	2,773,977	2.66	5.1
c. Estate crops	558,766	0.79	857,736	0.82	7.4
d. Livestock	1,644,585	2.32	2,371,417	2.28	6.3
e. Forestry	792,141	1.12	1,134,601	1.09	6.2
f. Fishery	1,225,249	1.73	1,836,298	1.76	7.0
	6,276,383	8.86	8,974,029	8.61	6.1
2. MINING & QUARRYING	13,941,512	19.69	16,006,096	15.36	2.3
a. Mining	13,754,251	19.42	15,636,463	15.00	2.2
a.1 Crude petroleum & natural gas	13,420,707	18.95	15,169,703	14.56	2.1
a.2 Non crude petroleum & natural gas	333,544	0.47	466,760	0.45	5.8
b. Quarrying	187,261	0.26	369,633	0.35	12.0
3. MANUFACTURING INDUSTRIES	9,566,549	13.51	19,221,079	18.44	12.3
a. Large & medium scale industries	5,818,579	8.22	12,125,609	11.64	13.0
b. Small scale & home industries	1,557,381	2.20	2,320,670	2.23	6.9
c. Petroleum refinery	725,917	1.03	1,888,848	1.81	17.3
d. Liquified natural gas (LNG)	1,464,672	2.07	2,885,952	2.77	12.0
4. ELECTRICITY, GAS & WATER SUPPLY	603,267	0.85	1,249,533	1.20	12.9
5. CONSTRUCTION	3,360,368	4.75	4,711,858	4.52	5.8
Industry	12,926,917	18.25	23,932,937	22.97	10.8
6. TRADE, RESTAURANT & HOTEL	11,556,955	16.32	17,970,190	17.24	7.6
7. TRANSPORT & COMMUNICATION	4,333,313	6.12	6,545,356	6.28	7.1
8. BANKING & OTHER FINANCIAL INTERMEDIARIES	1,932,257	2.73	3,614,201	3.47	11.0
9. OWNERSHIP OF DWELLING	1,784,919	2.52	2,236,014	2.15	3.8
	3,717,176	5.25	5,850,215	5.61	7.9
10. PUBLIC ADMINISTRATION & DEFENCE	5,167,769	7.30	7,003,676	6.72	5.2
11. SERVICES	2,453,348	3.46	3,467,217	3.33	5.9
TOTAL	70,818,366	100.00	104,210,090	100.00	6.6
Total without oil, gas, and its products	55,207,070	77.96	84,265,587	80.86	7.3
Total oil, gas and its products	15,611,296	22.04	19,944,503	19.14	4.2

Source: PENDAPATAN REGIONAL PROPINSI-PROPINSI DI INDONESIA MENURUT LAPANGAN USAHA 1983-1989; Central Bureau of Statistics, 1991

Table 2.4 Population Aged 10 Year and Over Who Worked during the Previous Week by Province and Main Industry 1990

Province	Agriculture, Forestry, Fisheries	Mining & Quarrying	Manufacturing	Electricity, Gas & Water	Construction	Wholesale, Retail Restaurant	Transportation Communication	Finance, Insurance Real Estates, Business	Public Services	TOTAL
11 D.I.Aceh	993,318	6,240	80,656	1,712	29,668	116,439	23,835	3,272	130,528	1,385,668
12 Sumatera Utara	2,746,152	16,606	227,094	6,460	90,609	465,412	126,647	22,817	425,890	4,127,687
13 Sumatera Barat	950,854	7,326	79,515	3,738	24,291	209,469	30,959	6,093	213,356	1,525,601
14 Riau	664,392	32,006	50,230	982	32,927	111,771	40,645	5,725	97,516	1,036,194
15 Jambi	636,374	2,583	33,790	1,038	15,309	51,350	12,883	2,671	70,938	826,936
16 Sumatera Selatan	1,650,407	36,821	103,813	6,751	50,977	265,921	67,395	22,998	227,963	2,433,046
17 Bengkulu	416,283	3,336	13,775	389	3,745	42,357	6,195	707	53,378	540,165
18 Lampung	2,306,739	22,867	128,975	2,717	44,144	220,752	48,256	10,865	228,252	3,013,567
SUMATERA	10,364,519	127,785	717,848	23,787	291,670	1,483,471	356,815	75,148	1,447,821	14,888,864
31 D.K.I.Jakarta	31,634	7,786	602,900	27,253	146,477	871,499	212,636	126,030	912,334	2,938,549
32 Jawa Barat	5,576,083	91,466	1,805,665	26,141	466,644	2,361,582	563,401	117,640	1,709,972	12,718,594
33 Jawa Tengah	6,996,511	92,732	1,652,876	11,450	435,602	2,309,213	380,010	75,569	1,470,821	13,424,784
34 D.I.Yogyakarta	727,722	9,491	178,585	1,992	62,562	267,173	29,950	8,966	216,249	1,502,690
35 Jawa Timur	8,747,079	84,411	1,602,425	23,395	383,932	2,301,642	471,056	125,375	1,692,829	15,432,144
JAWA	22,079,029	285,886	5,842,451	90,231	1,495,217	8,111,109	1,657,053	453,580	6,002,205	46,016,761
51 Bali	811,532	9,246	201,266	3,579	64,182	224,061	32,623	16,094	147,811	1,510,394
52 Nusa Tenggara Barat	859,868	12,487	118,366	1,782	35,248	231,435	42,669	5,306	126,644	1,433,805
53 Nusa Tenggara Timur	1,341,501	2,383	98,207	815	14,074	53,239	11,100	2,914	123,041	1,647,274
54 Timor Timur	295,376	818	9,263	0	3,675	10,216	1,362	816	32,273	353,799
BALI, NUSA TENGGARA & TIMOR	3,308,277	24,934	427,102	6,176	117,179	518,951	87,754	25,130	429,769	4,945,272
61 Kalimantan Barat	1,022,645	10,080	84,234	2,912	25,593	94,125	25,203	6,414	106,704	1,377,910
62 Kalimantan Tengah	402,076	12,747	44,925	136	5,250	55,006	8,333	2,405	62,272	593,150
63 Kalimantan Selatan	653,033	13,307	122,156	2,226	15,865	150,007	31,045	3,929	138,625	1,130,193
64 Kalimantan Timur	355,269	20,153	75,530	1,232	29,419	101,242	30,920	15,714	100,905	730,384
KALIMANTAN	2,433,023	56,287	326,845	6,506	76,127	400,380	95,501	28,462	408,506	3,831,637
71 Sulawesi Utara	660,067	10,153	75,989	581	24,026	102,669	26,351	1,922	135,672	1,037,430
72 Sulawesi Tengah	553,991	7,548	26,974	49	6,474	53,847	8,635	5,503	70,315	733,336
73 Sulawesi Selatan	1,627,832	8,385	210,587	4,426	25,750	271,175	52,825	9,926	345,830	2,556,736
74 Sulawesi Tenggara	415,568	1,412	18,201	431	4,323	46,151	8,496	1,153	43,807	539,542
SULAWESI	3,257,458	27,498	331,751	5,487	60,573	473,842	96,307	18,504	595,624	4,867,044
81 Maluku	426,092	2,026	34,765	700	12,892	47,026	12,275	1,469	83,750	620,995
82 Irian Jaya	509,911	3,804	12,501	1,829	5,851	32,578	6,767	4,117	102,649	680,007
MALUKU & IRIAN JAYA	936,003	5,830	47,266	2,529	18,743	79,604	19,042	5,586	186,399	1,301,002
WHOLE INDONESIA	42,378,309	528,220	7,693,263	134,716	2,059,509	11,067,357	2,312,472	606,410	9,070,324	75,850,580

Source: Statistik Indonesia 1991, Biro Pusat Statistik

Table 2.5 Labor Productivity by Province and Sector (Rupiah/Labor)

Province	Agriculture, Forestry, Fisheries	Mining & Quarrying	Manufacturing	Electricity, Gas & Water	Construction	Wholesale, Retail Restaurant	Transportation Communication	Finance, Insurance Real Estates, Business	Public Services	TOTAL
11 D.I.Aceh	759,239	359,577,083	27,122,892	4,359,813	2,138,466	2,360,858	6,570,128	18,984,108	945,529	4,238,741
12 Sumatera Utara	668,003	10,115,802	4,337,050	8,899,071	1,911,477	1,880,994	3,784,227	21,012,929	1,014,924	1,328,691
13 Sumatera Barat	544,561	3,404,859	2,297,919	6,647,405	2,590,713	1,880,374	6,151,006	27,188,085	686,519	1,120,659
14 Riau	631,412	224,315,253	9,988,075	19,692,464	767,182	4,738,340	4,169,763	26,137,991	800,279	8,755,125
15 Jambi	430,575	70,476,965	3,296,123	4,374,759	662,682	2,511,217	4,301,483	22,733,808	852,054	1,073,412
16 Sumatera Selatan	535,947	29,833,274	10,088,207	2,495,038	3,567,825	3,850,128	2,682,083	9,539,482	790,343	1,986,471
17 Bengkulu	409,286	7,596,523	884,211	5,056,555	9,395,194	1,280,945	8,679,257	36,241,867	814,081	781,530
18 Lampung	345,201	161,980	1,536,383	3,882,223	1,063,383	1,162,046	2,212,388	17,370,087	740,475	589,555
SUMATERA	545,236	85,500,653	7,280,037	6,013,285	2,053,629	2,384,532	3,902,507	17,982,182	851,803	2,018,907
31 D.K.I.Jakarta	4,529,841	0	4,167,107	18,934,833	6,616,971	3,016,481	6,599,400	24,339,356	602,964	4,012,400
32 Jawa Barat	574,526	22,992,576	1,793,489	8,836,579	2,329,879	1,441,250	1,664,450	8,546,608	656,565	1,284,168
33 Jawa Tengah	490,545	671,483	1,589,107	7,436,681	1,143,613	861,713	1,223,115	12,009,395	865,913	844,713
34 D.I.Yogyakarta	411,538	645,980	572,982	6,446,285	711,326	747,048	2,598,297	16,763,551	669,007	690,541
35 Jawa Timur	489,100	1,028,871	1,892,698	5,944,860	2,220,654	1,428,767	2,049,215	12,700,363	743,996	1,004,085
JAWA	514,365	7,899,254	1,970,512	10,906,440	2,308,494	1,419,100	2,322,758	14,822,214	724,824	1,216,870
51 Bali	669,804	448,410	392,789	4,470,243	1,142,376	1,204,043	5,439,138	13,500,186	764,524	988,870
52 Nusa Tenggara Barat	448,077	827,981	170,978	1,810,887	961,218	497,647	1,277,813	9,436,299	609,693	523,050
53 Nusa Tenggara Timur	253,808	1,561,057	132,974	5,506,748	1,685,235	1,517,497	5,125,495	12,246,397	878,293	404,853
54 Timor Timur	158,757	1,063,570	220,771	-	5,087,347	1,230,423	6,880,323	7,870,098	830,230	353,616
BALI, NUSA TENGGARA & TIMOR	397,860	765,020	267,845	4,074,158	1,276,807	921,690	3,398,455	12,313,928	756,404	613,828
61 Kalimantan Barat	396,714	784,722	3,700,703	2,054,258	2,073,106	3,571,177	4,336,309	18,393,826	792,229	1,039,479
62 Kalimantan Tengah	556,081	235,585	2,377,874	25,786,765	9,797,143	3,663,891	5,315,373	20,325,572	1,003,437	1,256,943
63 Kalimantan Selatan	527,038	3,465,695	1,490,520	7,063,792	2,600,504	1,925,910	3,953,551	31,391,957	845,014	1,133,846
64 Kalimanian Timur	1,521,512	113,367,985	18,720,906	14,382,305	3,031,034	6,654,383	5,666,591	10,553,392	1,049,819	7,484,846
KALIMANTAN	622,273	41,603,496	6,163,830	6,598,832	3,085,883	3,747,130	4,728,013	16,022,627	905,965	2,329,590
71 Sulawesi Utara	461,703	705,801	562,437	14,910,499	1,959,544	1,139,039	4,111,533	54,016,129	965,299	839,067
72 Sulawesi Tengah	399,523	1,876,391	1,437,384	44,122,449	5,459,222	1,262,949	5,666,589	7,425,586	881,974	724,890
73 Sulawesi Selatan	673,507	2,368,873	780,741	7,018,301	3,863,612	1,630,460	4,471,841	18,186,681	715,071	984,601
74 Sulawesi Tenggara	475,989	17,099,858	486,182	4,828,306	3,202,637	1,282,421	6,812,382	22,143,105	1,729,724	862,016
SULAWESI	558,795	2,376,064	767,968	8,013,304	3,231,737	1,448,320	4,686,856	18,954,496	866,397	900,859
81 Maluku	661,719	18,596,742	2,561,484	5,838,571	1,285,759	3,412,708	3,259,063	53,253,233	839,582	1,253,437
82 Irian Jaya	479,764	94,186,120	772,898	3,414,981	10,991,284	2,977,009	9,281,809	11,804,469	1,347,699	1,514,504
MALUKU & IRIAN JAYA	562,594	67,917,839	2,088,436	4,085,805	4,315,531	3,234,398	5,399,380	22,704,619	1,119,400	1,389,891
WHOLE INDONESIA	523,496	30,301,950	2,498,430	9,275,313	2,287,855	1,623,711	2,830,458	15,364,905	772,153	1,373,887

Source: Statistik Indonesia 1991, Biro Pusat Statistik

Table 2.6 Distribution of Population by Monthly per Capita Expenditure Class (1/2)

Year		Monthly per capita expenditure class (Rp.)								
		Less than 8000	8000 9999	10000 14999	15000 19999	20000 29999	30000 39999	40000 59999	60000 and over	Total
1984	Urban	1,436,891	1,793,531	7,077,593	7,466,356	10,018,364	4,254,450	3,082,430	1,655,510	36,785,125
	Rural	27,555,490	19,677,701	38,618,058	17,749,347	11,419,674	3,020,466	1,396,807	396,252	119,833,795
	Total	28,992,381	21,471,232	45,695,651	25,215,703	21,438,038	7,274,916	4,479,237	2,051,762	156,618,920

Year		Monthly per capita expenditure class (Rp.)								
		Less than 6,749	6,749 8,435	8,436 12,653	12,654 16,871	16,872 25,307	25,308 33,743	33,744 50,615	50,616 and over	Total
1987	Urban	227,042	634,770	4,770,847	6,893,035	13,011,027	7,894,469	6,836,495	4,008,319	44,276,004
	Rural	6,280,244	11,581,589	40,917,851	29,602,137	23,586,397	6,878,958	3,351,233	1,140,414	123,338,823
	Total	6,507,286	12,216,359	45,688,698	36,495,172	36,597,424	14,773,427	10,187,728	5,148,733	167,614,827

Year		Monthly per capita expenditure class (Rp.)								
		Less than 5,204	5,204 6,504	6,504 9,756	9,757 13,008	13,009 19,513	19,513 26,017	26,018 39,026	39,027 and over	Total
1990	Urban	22,559	171,930	2,162,568	5,797,134	13,258,850	10,879,435	11,409,798	9,842,759	53,545,033
	Rural	917,902	2,623,911	21,434,083	31,138,527	40,170,809	15,556,257	8,678,892	2,723,766	123,244,147
	Total	940,461	2,795,841	23,596,651	36,935,661	53,429,659	26,435,692	20,088,690	12,566,525	176,789,180

Source: Pengeluaran Untuk Konsumsi Penduduk Indonesia 1990, Buku 1; Central Bureau of Statistics1992

Table 2.6 Distribution of Population by Monthly per Capita Expenditure Class (2/2)

Year		Monthly per capita expenditure class (Rp.)								
		Less than 8000	8000 9999	10000 14999	15000 19999	20000 29999	30000 39999	40000 59999	60000 and over	Total
1984	Urban	3.91%	4.88%	19.24%	20.30%	27.23%	11.57%	8.38%	4.50%	100.00%
	Rural	22.99%	16.42%	32.23%	14.81%	9.53%	2.52%	1.17%	0.33%	100.00%
	Total	18.51%	13.71%	29.18%	16.10%	13.69%	4.64%	2.86%	1.31%	100.00%

Year		Monthly per capita expenditure class (Rp.)								
		Less than 6,749	6,749 8,435	8,436 12,653	12,654 16,871	16,872 25,307	25,308 33,743	33,744 50,615	50,616 and over	Total
1987	Urban	0.51%	1.43%	10.78%	15.57%	29.39%	17.83%	15.44%	9.05%	100.00%
	Rural	5.09%	9.39%	33.18%	24.00%	19.12%	5.58%	2.72%	0.92%	100.00%
	Total	3.88%	7.29%	27.26%	21.77%	21.83%	8.81%	6.08%	3.07%	100.00%

Year		Monthly per capita expenditure class (Rp.)								
		Less than 5,204	5,204 6,504	6,504 9,756	9,757 13,008	13,009 19,513	19,513 26,017	26,018 39,026	39,027 and over	Total
1990	Urban	0.04%	0.32%	4.04%	10.83%	24.76%	20.32%	21.31%	18.38%	100.00%
	Rural	0.74%	2.13%	17.39%	25.27%	32.59%	12.62%	7.04%	2.21%	100.00%
	Total	0.53%	1.58%	13.35%	20.89%	30.22%	14.95%	11.36%	7.11%	100.00%

Source: Pengeluaran Untuk Konsumsi Penduduk Indonesia 1990, Buku 1; Central Bureau of Statistics1992

Table 2.7 Comparison of Average per Capita Monthly Expenditure between Urban and Rural Areas by Province 1990

Unit: Rp./month/person

Province	Urban			Rural			Whole Province		
	Food	Non-food	Total	Food	Non-food	Total	Food	Non-food	Total
11 D.I.Aceh	24,142	14,585	38,727	19,039	6,841	25,880	19,819	8,174	27,993
12 Sumatera Utara	21,199	15,653	36,852	17,809	7,193	25,002	18,989	10,135	29,124
13 Sumatera Barat	26,807	21,088	47,895	18,826	8,828	27,654	20,389	11,234	31,623
14 Riau	28,458	20,903	49,361	22,447	9,134	31,581	24,348	12,857	37,205
15 Jambi	23,788	14,255	38,043	22,034	7,823	29,857	22,399	9,160	31,559
16 Sumatera Selatan	24,408	17,252	41,660	18,340	6,605	24,945	20,110	9,712	29,822
17 Bengkulu	23,784	19,300	43,084	18,510	7,985	26,495	19,532	10,177	29,709
18 Lampung	18,841	13,284	32,125	15,815	7,455	23,270	16,191	8,181	24,372
SUMATERA									
31 D.K.I.Jakarta	29,306	37,582	66,888	0	0	0	29,306	37,582	66,888
32 Jawa Barat	23,152	20,974	44,126	18,275	8,952	27,227	19,907	12,974	32,881
33 Jawa Tengah	17,721	14,418	32,139	13,706	7,611	21,317	14,764	9,406	24,170
34 D.I.Yogyakarta	19,151	21,938	41,089	14,131	9,163	23,294	16,273	14,616	30,889
35 Jawa Timur	19,213	20,093	39,306	13,865	8,346	22,211	15,302	11,501	26,803
JAWA									
51 Bali	23,654	22,505	46,159	17,683	11,348	29,031	19,203	14,192	33,395
52 Nusa Tenggara Barat	20,033	14,583	34,616	14,093	6,706	20,799	15,111	8,052	23,163
53 Nusa Tenggara Timur	21,038	15,278	36,316	13,383	5,161	18,544	14,230	6,281	20,511
54 Timor Timur	18,783	26,628	45,411	17,211	7,699	24,910	17,287	9,198	26,485
BALI, NUSA TENGGARA & TIMOR									
61 Kalimantan Barat	24,165	19,004	43,169	20,335	5,552	25,887	21,116	8,291	29,407
62 Kalimantan Tengah	27,601	16,068	43,669	22,744	6,304	29,048	23,567	7,960	31,527
63 Kalimantan Selatan	25,522	15,537	41,059	21,338	7,860	29,198	22,414	9,911	32,325
64 Kalimantan Timur	28,758	22,226	50,984	21,751	9,522	31,273	25,134	15,655	40,789
KALIMANTAN									
71 Sulawesi Utara	22,151	18,093	40,244	18,864	8,535	27,399	19,601	10,671	30,272
72 Sulawesi Tengah	21,836	18,452	40,288	15,826	6,514	22,340	16,781	8,411	25,192
73 Sulawesi Selatan	21,156	16,614	37,770	15,879	6,868	22,747	17,131	9,179	26,310
74 Sulawesi Tenggara	20,110	16,730	36,840	13,650	6,845	20,495	14,708	8,463	23,171
SULAWESI									
81 Maluku	21,758	19,476	41,234	17,248	8,187	25,435	18,077	10,261	28,338
82 Irian Jaya	23,795	23,252	47,047	17,062	6,873	23,935	18,684	10,819	29,503
MALUKU & IRIAN JAYA									
WHOLE INDONESIA	**22,633**	**21,396**	**44,029**	**16,379**	**7,917**	**24,296**	**18,272**	**11,999**	**30,271**

Source: Pengeluaran Untuk Konsumsi Penduduku Indonesia 1990 Buku 1 and 3

Table 2.8 Average Daily per Capita Consumption of Calorie by Commodity Group and Province

Unit: Cal/person

URBAN	11	12	13	14	15	P 16	R 17	O 18	V 31	I 32	N 33	C 34	E 35	51	52	N 53	U 54	M 61	B 62	E 63	R 64	71	72	73	74	81	82	Indonesia
Monthly Expediture on Food	24,142	21,199	26,807	28,458	23,788	24,408	23,784	18,841	29,306	23,152	17,721	19,151	19,213	23,654	20,033	21,038	18,783	24,165	27,601	25,522	28,758	22,151	21,836	21,156	20,110	21,758	23,795	22,633
Average per Capita Consumption of Calorie *																												
1. Cereals	1,356	1,158	1,268	1,102	1,217	1,133	1,428	1,268	1,020	1,198	1,069	980	1,033	1,257	1,338	1,310	1,045	1,131	1,216	1,073	1,259	1,309	1,335	1,292	1,260	1,048	1,096	1,124
2. Tubers	34	33	45	43	56	65	46	74	29	40	53	44	38	52	49	104	31	31	48	22	50	58	46	30	92	91	114	42
3. Fish	88	68	59	71	56	50	42	27	31	31	19	8	22	30	46	44	25	57	65	71	74	72	78	75	109	114	56	37
4. Meat	12	26	28	37	24	34	23	19	42	28	22	25	24	57	27	47	51	41	36	20	25	36	24	10	27	12	21	28
5. Eggs and milk	30	34	47	54	40	55	41	32	50	39	27	35	28	41	26	32	30	40	36	31	46	44	33	32	30	24	49	37
6. Vegetables	25	37	35	28	34	37	40	41	33	32	41	45	32	33	40	41	32	27	32	23	40	32	34	26	35	35	40	34
7. Legumes	34	35	43	52	39	49	40	52	58	66	63	68	70	55	71	46	27	32	41	26	52	41	54	36	39	34	41	58
8. Fruits	40	30	44	30	40	42	44	44	33	38	39	50	35	40	32	37	20	34	45	42	38	46	57	41	61	41	50	37
9. Other food items	473	367	413	436	439	390	372	351	366	317	315	366	330	287	304	325	264	348	347	390	430	444	510	339	363	367	380	347
10. Prepared food	6	11	7	6	6	15	4	4	14	13	5	7	6	5	7	5	6	8	7	9	10	6	4	8	7	7	12	9
11. Alcoholic bevarages		0	0	0	0	0	0	0	0	0	0	0	0	0	0	1		0			0	0	0	0	0	0	1	0
Total	2,098	1,798	1,991	1,859	1,952	1,870	2,080	1,914	1,676	1,801	1,652	1,628	1,619	1,857	1,941	1,993	1,531	1,748	1,872	1,704	2,023	2,088	2,174	1,890	2,024	1,773	1,861	1,755

RURAL	11	12	13	14	15	P 16	R 17	O 18	V 31	I 32	N 33	C 34	E 35	51	52	N 53	U 54	M 61	B 62	E 63	R 64	71	72	73	74	81	82	Indonesia
Monthly Expediture on Food	19,039	17,809	18,826	22,447	22,034	18,340	18,510	15,815	0	18,275	13,706	14,131	13,865	17,683	14,093	13,383	17,211	20,335	22,744	21,338	21,751	18,864	15,826	15,879	13,650	17,248	17,062	16,379
Average per Capita Consumption of Calorie *																												
1. Cereals	1,487	1,429	1,530	1,223	1,524	1,336	1,572	1,320		1,464	1,177	983	1,126	1,453	1,483	1,362	1,045	1,362	1,425	1,312	1,328	1,354	1,309	1,511	1,207	737	650	1,301
2. Tubers	58	134	51	79	67	119	89	317	0	72	125	252	152	133	71	213	123	82	89	61	83	138	221	103	278	397	746	135
3. Fish	79	57	38	68	58	49	41	31	0	38	17	7	26	32	38	25	16	55	62	72	67	68	64	69	78	104	58	39
4. Meat	9	20	12	17	16	12	12	14	0	17	10	11	7	42	11	53	71	44	32	9	27	36	22	19	8	21	86	16
5. Eggs and milk	17	15	20	26	18	21	15	16	0	18	12	17	12	16	9	5	21	14	16	19	19	18	11	17	9	13	9	15
6. Vegetables	26	42	34	34	41	39	41	61	0	40	52	60	41	51	44	79	47	32	37	30	42	31	29	29	36	46	43	43
7. Legumes	23	23	19	22	31	23	26	45	0	52	60	97	52	49	33	46	103	17	16	22	27	42	41	38	17	57	43	45
8. Fruits	35	30	32	38	57	48	48	63	0	53	41	54	33	44	28	58	51	39	62	60	43	63	61	56	66	101	55	45
9. Other food items	390	348	396	466	461	350	354	372	0	263	294	371	315	287	242	265	273	348	348	378	370	444	498	353	331	437	317	323
10. Prepared food	3	3	7	3	3	2	1	4	0	5	3	5	2	2	3	2	9	3	5	5	5	3	3	4	5	4	2	3
11. Alcoholic bevarages		0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0		0	0	0	0	0	0	0	0
Total	2,128	2,100	2,138	1,975	2,277	1,999	2,200	2,241	0	2,021	1,792	1,856	1,767	2,110	1,961	2,108	1,760	1,997	2,094	1,968	2,010	2,196	2,259	2,197	2,035	1,918	2,009	1,965

WHOLE PROVINCE	11	12	13	14	15	P 16	R 17	O 18	V 31	I 32	N 33	C 34	E 35	51	52	N 53	U 54	M 61	B 62	E 63	R 64	71	72	73	74	81	82	Indonesia
Monthly Expediture on Food	19,819	18,989	20,389	24,348	22,399	20,110	19,532	16,191	29,306	19,907	14,764	16,273	15,302	19,203	15,111	14,230	17,287	21,116	25,567	22,414	25,134	19,601	16,781	17,131	14,708	18,077	18,684	18,272
Average per Capita Consumption of Calorie *																												
1. Cereals	1,467	1,334	1,479	1,185	1,460	1,277	1,544	1,313	1,020	1,375	1,149	982	1,101	1,403	1,458	1,356	1,045	1,315	1,389	1,248	1,295	1,344	1,313	1,486	1,215	795	758	1,247
2. Tubers	55	99	50	67	65	103	81	287	29	61	106	163	121	112	67	201	116	71	82	50	67	120	193	85	247	341	594	107
3. Fish	80	61	42	69	57	49	41	30	31	36	18	7	25	31	40	27	16	55	63	72	70	69	66	71	83	105	57	38
4. Meat	9	22	15	23	18	19	14	14	42	20	13	17	12	46	14	52	69	43	33	12	26	36	22	17	12	19	71	20
5. Eggs and milk	19	21	25	35	23	31	20	18	50	25	16	25	16	23	12	8	22	19	20	22	32	23	15	20	13	15	19	22
6. Vegetables	26	40	34	32	40	39	41	58	33	37	49	54	38	46	43	75	46	31	36	28	41	32	30	28	36	44	43	40
7. Legumes	25	27	24	31	32	31	29	46	58	56	62	85	57	50	40	46	97	20	20	23	39	42	43	37	21	52	42	49
8. Fruits	36	30	35	36	54	46	47	61	33	48	41	52	34	43	29	56	49	38	59	55	41	59	60	52	65	90	54	43
9. Other food items	396	355	399	456	457	362	358	370	366	281	300	369	319	287	253	271	273	348	330	381	399	444	500	350	337	424	332	330
10. Prepared food	4	6	7	4	4	6	2	4	14	7	4	6	3	3	3	2	9	4	5	6	7	4	4	5	5	4	4	5
11. Alcoholic bevarages		0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0		0	0	0	0	0	0	0	0
Total	2,118	1,995	2,109	1,938	2,209	1,962	2,177	2,200	1,676	1,947	1,756	1,759	1,727	2,046	1,958	2,096	1,742	1,946	2,038	1,897	2,016	2,172	2,246	2,151	2,033	1,891	1,974	1,901

Source: Konsumusi Kalori dan Protein Penduduk Indonesia dan Propinsi 1990

Note: * unit: Rp./month

Table 2.9 Length of Roads by Level of Government Responsibility

Unit: km

Year	State	Provincial	Regency	Total
1972	10,980	25,966	58,517	95,463
1973	10,847	26,235	60,914	97,996
1974	10,945	25,878	64,435	101,258
1975	11,267	28,196	65,218	104,681
1976	11,335	27,486	82,978	121,799
1977	11,436	27,410	83,948	122,794
1978	11,572	27,911	89,232	128,715
1979	11,573	28,772	88,717	129,062
1980	12,152	33,164	98,225	143,541
1981	11,857	33,182	109,142	154,181
1982	11,935	33,973	119,230	165,138
1983	11,988	35,892	136,768	184,648
1984	11,938	36,310	146,696	194,944
1985	12,486	38,939	155,812	207,237
1986	13,015	39,261	161,757	214,033
1987	13,863	40,277	168,784	222,924
1988	14,590	40,299	195,425	250,314
1989	17,185	40,704	208,437	266,326

Source : Directorate General for Road Construction
Provincial and Regency Public Works Offices

Table 2.10 Length of Roads under State, Province, Regency and Municipality Responsiblities by Province at the End of Year 1989

Province	State	Provincial	Regency/ Municipality	Total (km)	Area (km2)	Road Density (m/km2)
1. D.I. Aceh	492	2,065	7,736	10,293	55,392	185.82
2. Sumatera Utara	846	2,611	20,621	24,078	70,787	340.15
3. Sumatera Barat	802	1,131	9,278	11,211	49,778	225.22
4. Riau	103	2,545	8,012	10,660	94,561	112.73
5. Jambi	707	1,399	4,046	6,152	44,800	137.32
6. Sumatera Selatan	1,018	2,758	7,651	11,427	103,688	110.21
7. Bengkulu	249	1,099	2,551	3,899	21,168	184.19
8. Lampung	453	1,614	4,835	6,902	33,307	207.22
SUMATERA	**4,670**	**15,222**	**64,730**	**84,622**	**473,481**	**178.72**
9. D.K.I. Jakarta	-	-	-	-	590	-
10. Jawa Barat	677	1,987	16,998	19,662	46,300	424.67
11. Jawa Tengah	453	1,838	17,719	20,010	34,206	584.99
12. D.I. Yogyakarta	91	731	6,036	6,858	3,169	2164.09
13. Jawa Timur	1,053	2,476	21,633	25,162	47,921	525.07
JAWA	**2,274**	**7,032**	**62,386**	**71,692**	**132,186**	**542.36**
14. Bali	430	536	5,328	6,294	5,561	1131.81
15. Nusa Tenggara Barat	486	429	3,355	4,270	20,177	211.63
16. Nusa Tenggara Timur	1,116	1,781	11,015	13,912	47,876	290.58
17. Timor Timur	661	984	-	1,645	14,874	110.60
BALI & NUSA TENGGARA	**2,693**	**3,730**	**19,698**	**26,121**	**88,488**	**295.19**
18. Kalimantan Barat	1,248	1,704	5,644	8,596	146,760	58.57
19. Kalimantan Tengah	142	914	7,453	8,509	152,600	55.76
20. Kalimantan Selatan	567	991	4,778	6,336	37,660	168.24
21. Kalimantan Timur	657	1,151	3,015	4,823	202,440	23.82
KALIMANTAN	**2,614**	**4,760**	**20,890**	**28,264**	**539,460**	**52.39**
22. Sulawesi Utara	820	1,353	5,062	7,235	19,023	380.33
23. Sulawesi Tengah	861	2,422	4,511	7,794	69,726	111.78
24. Sulawesi Selatan	921	1,690	19,423	22,034	72,781	302.74
25. Sulawesi Tenggara	337	1,091	3,955	5,383	27,686	194.43
SULAWESI	**2,939**	**6,556**	**32,951**	**42,446**	**189,216**	**224.33**
26. Maluku	381	2,083	2,619	5,083	74,505	68.22
27. Irian Jaya	1,614	1,321	5,163	8,098	421,981	19.19
MALUKU & IRIAN JAYA	**1,995**	**3,404**	**7,782**	**13,181**	**496,486**	**26.55**
INDONESIA	**17,185**	**40,704**	**208,437**	**266,326**	**1,919,317**	**138.76**

Source: Statistical Year Book of Indonesia 1991; Central Bureau of Statistics

Table 2.11 Distribution Rate of Households by Province and Source of Drinking Water as of 1989

Unit:%

PROVINCE	Pipe	Pump	Well	Spring	River	Others	Total
1. D.I. Aceh	5.27	0.95	73.10	6.55	13.01	1.13	100.00
2. Sumatera Utara	16.56	2.46	57.49	12.58	6.84	4.07	100.00
3. Sumatera Barat	8.02	5.43	51.66	25.79	4.18	4.91	100.00
4. Riau	4.48	0.94	38.22	4.21	11.56	40.59	100.00
5. Jambi	9.45	0.10	37.57	0.43	36.00	16.46	100.00
6. Sumatera Selatan	16.85	1.46	59.29	0.45	20.95	1.01	100.00
7. Bengkulu	7.79	2.49	77.03	4.68	7.99	-	100.00
8. Lampung	1.87	1.56	88.07	4.88	1.83	1.79	100.00
SUMATERA	10.21	2.07	62.33	8.53	10.50	6.36	100.00
9. D.K.I Jakarta	40.46	47.78	11.18	-	-	0.58	100.00
10. Jawa Barat	7.14	14.28	56.49	19.09	2.23	0.76	100.00
11. Jawa Tengah	9.11	6.74	65.27	15.59	1.91	1.37	100.00
12. D.I. Yogyakarta	4.40	4.78	75.35	7.84	0.34	7.29	100.00
13. Jawa Timur	14.83	6.79	60.37	13.03	2.61	2.36	100.00
JAWA	12.52	12.15	57.20	14.47	2.04	1.62	100.00
14. Bali	25.16	3.68	38.75	19.34	4.94	8.12	100.00
15. Nusa Tenggara Barat	6.84	8.90	62.03	14.39	7.84	-	100.00
16. Nusa Tenggara Timur	19.10	1.13	23.53	45.05	7.54	3.66	100.00
17. Timor Timur	27.83	6.82	10.77	41.11	13.11	0.36	100.00
BALI & NUSA TENGGARA	17.16	4.92	40.27	26.94	7.28	3.43	100.00
18. Kalimantan Barat	6.76	0.09	14.62	1.19	48.20	29.13	100.00
19. Kalimantan Tengah	5.57	7.83	17.66	1.06	58.77	9.12	100.00
20. Kalimantan Selatan	21.58	15.17	18.29	-	44.84	0.12	100.00
21. Kalimantan Timur	34.44	7.68	17.78	0.14	28.53	11.42	100.00
KALIMANTAN	16.75	7.46	16.85	0.59	44.79	13.56	100.00
22. Sulawesi Utara	25.50	0.93	53.24	18.51	0.71	1.11	100.00
23. Sulawesi Tengah	20.70	5.93	48.21	3.42	18.51	3.24	100.00
24. Sulawesi Selatan	15.12	3.99	62.35	14.93	3.20	0.41	100.00
25. Sulawesi Tenggara	17.57	1.21	68.11	1.70	9.70	1.70	100.00
SULAWESI	18.32	3.33	59.07	12.83	5.38	1.07	100.00
26. Maluku	12.09	2.30	60.76	17.29	6.13	1.44	100.00
27. Irian Jaya	16.12	0.63	20.59	18.27	32.51	11.87	100.00
MALUKU & IRIAN JAYA	14.06	1.48	41.18	17.77	18.99	6.52	100.00
INDONESIA	12.94	8.85	55.21	13.33	6.44	3.22	100.00

Source: Statistical Year Book of Indonesia 1991; Central Bureau of Statistics

Table 2.12 Distribution Rate of Households by Province and Source of Lighting as of 1989

Unit:%

PROVINCE	Electricity	Pressure lamp	Kerosene	Others	Total
1. D.I. Aceh	24.61	13.92	61.36	0.10	100.00
2. Sumatera Utara	52.21	18.42	29.31	0.07	100.00
3. Sumatera Barat	31.49	14.58	53.93	-	100.00
4. Riau	39.85	22.72	37.43	-	100.00
5. Jambi	29.26	15.90	54.84	-	100.00
6. Sumatera Selatan	52.58	15.67	31.57	0.18	100.00
7. Bengkulu	26.43	7.88	65.42	0.28	100.00
8. Lampung	20.23	11.71	67.90	0.16	100.00
SUMATERA	38.27	15.72	45.92	0.09	100.00
9. D.K.I Jakarta	92.49	3.37	3.66	0.48	100.00
10. Jawa Barat	48.92	7.25	43.77	0.07	100.00
11. Jawa Tengah	40.94	10.07	48.94	0.05	100.00
12. D.I. Yogyakarta	46.77	3.95	49.28	-	100.00
13. Jawa Timur	40.98	12.27	46.62	0.13	100.00
JAWA	47.51	9.19	43.19	0.11	100.00
14. Bali	66.85	6.83	26.21	0.11	100.00
15. Nusa Tenggara Barat	35.43	6.97	57.59	-	100.00
16. Nusa Tenggara Timur	14.17	8.88	76.95	-	100.00
17. Timor Timur	8.62	1.80	84.92	4.67	100.00
BALI & NUSA TENGGARA	35.99	7.17	56.50	0.34	100.00
18. Kalimantan Barat	30.65	11.44	57.63	0.28	100.00
19. Kalimantan Tengah	22.47	7.06	70.25	0.21	100.00
20. Kalimantan Selatan	46.54	1.10	52.36	-	100.00
21. Kalimantan Timur	65.92	5.47	28.47	0.14	100.00
KALIMANTAN	41.44	6.37	52.03	0.15	100.00
22. Sulawesi Utara	50.25	23.11	22.66	3.98	100.00
23. Sulawesi Tengah	22.16	36.30	41.54	-	100.00
24. Sulawesi Selatan	37.42	7.81	54.72	0.06	100.00
25. Sulawesi Tenggara	22.95	8.65	68.39	-	100.00
SULAWESI	36.66	15.00	47.47	0.88	100.00
26. Maluku	30.76	25.60	43.64	-	100.00
27. Irian Jaya	22.93	11.19	28.53	37.34	100.00
MALUKU & IRIAN JAYA	26.94	18.58	36.28	18.20	100.00
INDONESIA	43.76	10.74	45.00	0.50	100.00

Source: Statistical Year Book of Indonesia 1991; Central Bureau of Statistics

Table 2.13 Distribution Rate of Households by Province and Type of Cooking Fuels as of 1989

Unit:%

PROVINCE	Electricity	Gas	Kerosene	Firewood/ Charcoal	Others	Total
1. D.I. Aceh	0.20	0.98	12.96	85.39	0.47	100.00
2. Sumatera Utara	2.07	1.10	25.54	71.14	0.15	100.00
3. Sumatera Barat	0.51	0.20	17.82	81.47	-	100.00
4. Riau	0.41	0.53	40.55	58.26	0.26	100.00
5. Jambi	0.29	0.48	24.55	74.68	-	100.00
6. Sumatera Selatan	1.37	1.61	32.95	64.06	-	100.00
7. Bengkulu	0.22	-	16.53	83.25	-	100.00
8. Lampung	0.48	0.62	12.84	85.94	0.12	100.00
SUMATERA	1.02	0.87	23.10	74.88	0.13	100.00
9. D.K.I Jakarta	2.12	11.46	82.85	2.31	1.25	100.00
10. Jawa Barat	0.88	1.32	39.97	57.43	0.40	100.00
11. Jawa Tengah	0.51	0.97	17.45	80.77	0.30	100.00
12. D.I. Yogyakarta	0.46	1.54	15.75	76.59	5.66	100.00
13. Jawa Timur	0.46	0.74	22.64	75.28	0.88	100.00
JAWA	0.73	1.81	31.07	65.63	0.76	100.00
14. Bali	0.99	1.10	21.21	76.54	0.17	100.00
15. Nusa Tenggara Barat	0.35	0.08	13.31	86.09	0.17	100.00
16. Nusa Tenggara Timur	0.21	0.05	4.76	94.81	0.17	100.00
17. Timor Timur	0.72	-	4.31	94.61	0.36	100.00
BALI & NUSA TENGGARA	0.51	0.35	12.32	86.63	0.18	100.00
18. Kalimantan Barat	0.77	0.66	21.98	76.34	0.24	100.00
19. Kalimantan Tengah	1.37	0.21	7.57	90.85	-	100.00
20. Kalimantan Selatan	0.12	0.10	12.52	87.27	-	100.00
21. Kalimantan Timur	0.97	0.96	48.26	49.54	0.27	100.00
KALIMANTAN	0.70	0.48	22.17	76.52	0.14	100.00
22. Sulawesi Utara	0.68	0.14	22.03	77.01	0.14	100.00
23. Sulawesi Tengah	0.05	-	8.42	91.52	-	100.00
24. Sulawesi Selatan	0.38	2.71	17.48	79.44	-	100.00
25. Sulawesi Tenggara	0.59	0.12	8.09	91.14	0.06	100.00
SULAWESI	0.42	1.54	16.30	81.71	0.04	100.00
26. Maluku	0.53	-	15.91	83.48	0.08	100.00
27. Irian Jaya	0.36	0.51	19.10	79.78	0.25	100.00
MALUKU & IRIAN JAYA	0.45	0.25	17.47	81.68	0.16	100.00
INDONESIA	0.75	1.44	26.90	70.38	0.52	100.00

Source: Statistical Year Book of Indonesia 1991; Central Bureau of Statistics

Table 2.14 Percentage of Population 5 Years of Age and Over by Age Group and School Attendance as of 1990

Age Group	Urban			Rural			Urban + Rural		
	No Schooling	School	Not Attending School Anymore	No Schooling	School	Not Attending School Anymore	No Schooling	School	Not Attending School Anymore
5 - 9	27.00	72.11	0.89	34.60	64.17	1.23	32.46	66.40	1.14
10 - 14	0.61	90.64	8.75	1.85	80.84	17.31	1.48	83.74	14.78
15 - 19	0.84	58.56	40.60	3.25	31.71	65.04	2.40	41.19	56.41
20 - 24	1.78	18.60	79.62	6.82	4.73	88.45	4.92	9.97	85.11
25 - 29	3.68	3.97	92.35	11.99	0.85	87.17	9.14	1.92	88.95
30 - 34	4.92	0.84	94.24	16.00	0.41	83.58	12.32	0.56	87.13
35 - 39	5.83	0.61	93.55	19.58	0.32	80.10	15.31	0.41	84.28
40 - 44	9.81	0.41	89.77	28.26	0.34	71.40	22.85	0.36	76.78
45 +	28.50	0.03	71.47	50.40	-	49.59	44.37	0.01	55.62
Not Stated	18.72	-	81.28	32.56	-	67.44	29.36	-	70.64
TOTAL	10.52	31.72	57.76	22.16	25.19	52.65	18.51	27.23	54.25

Source: Statistical Year Book of Indonesia 1991; Central Bureau of Statistics

Table 2.15 Nunber of Hospitals and Beds by Province

PROVINCE	1987/88	1990/91	Increase rate of bed number (%)	Population in 1990	Nos. of bed per 100,000
1. D.I. Aceh	1,592	1,600	0.17	3,415,393	46.8
2. Sumatera Utara	11,141	11,536	1.17	10,252,311	112.5
3. Sumatera Barat	3,504	3,543	0.37	3,998,677	88.6
4. Riau	1,566	1,701	2.79	3,281,046	51.8
5. Jambi	999	949	-1.70	2,014,054	47.1
6. Sumatera Selatan	4,152	4,461	2.42	6,275,945	71.1
7. Bengkulu	394	415	1.75	1,178,951	35.2
8. Lampung	1,885	2,056	2.94	6,004,109	34.2
SUMATERA	25,233	26,261	1.34	36,420,486	72.1
9. D.K.I. Jakarta	15,196	16,180	2.11	8,222,515	196.8
10. Jawa Barat	12,546	13,261	1.86	35,378,483	37.5
11. Jawa Tengah	16,066	17,590	3.07	28,516,786	61.7
12. D.I. Yogyakarta	3,337	3,559	2.17	2,912,611	122.2
13. Jawa Timur	17,384	17,934	1.04	32,487,568	55.2
JAWA	64,529	68,524	2.02	107,517,963	63.7
14. Bali	2,278	2,540	3.70	2,777,356	91.5
15. Nusa Tenggara Barat	783	801	0.76	3,368,699	23.8
16. Nusa Tenggara Timur	1,682	1,716	0.67	3,267,919	52.5
17. Timor Timur	335	549	17.90	747,557	73.4
BALI & NUSA TENGGARA	5,078	5,606	3.35	10,161,531	55.2
18. Kalimantan Barat	1,980	2,016	0.60	3,235,366	62.3
19. Kalimantan Tengah	534	521	-0.82	1,395,861	37.3
20. Kalimantan Selatan	1,592	1,689	1.99	2,596,647	65.0
21. Kalimantan Timur	1,944	2,118	2.90	1,875,032	113.0
KALIMANTAN	6,050	6,344	1.59	9,102,906	69.7
22. Sulawesi Utara	2,914	2,820	-1.09	2,477,946	113.8
23. Sulawesi Tengah	1,090	1,197	3.17	1,703,330	70.3
24. Sulawesi Selatan	5,639	6,007	2.13	6,980,589	86.1
25. Sulawesi Tenggara	680	676	-0.20	1,349,298	50.1
SULAWESI	10,323	10,700	1.20	12,511,163	85.5
26. Maluku	1,584	1,676	1.90	1,851,087	90.5
27. Irian Jaya	1,521	1,600	1.70	1,629,087	98.2
MALUKU & IRIAN JAYA	3,105	3,276	1.80	3,480,174	94.1
INDONESIA	114,318	120,711	1.83	179,194,223	67.4

Source : Department of Health.
Note: Including Maternity Hospitals and Special Clinics

Table 2.16 Actual Government Receipts

(Billion RP)

KIND OF RECEIPTS	1987/1988	1988/1989	1989/1990	1990/1991
I. Routine Receipts	20,803	23,004	28,740	39,546
A. Oil and Gas Receipts	10,047	9,527	11,252	17,712
B. Non Oil and Gas Receipts	10,756	13,477	17,488	21,834
1 Income Tax	2,663	3,949	5,488	6,755
2 Value added tax on the sale of luxury goods (VAT)	3,390	4,505	5,837	7,463
3 Import Duties	938	1,192	1,587	2,486
4 Excise Duties	1,106	1,390	1,477	1,917
5 Export Tax	184	156	172	44
6 Other Tax	223	292	275	243
7 Land Tax/Taxes on Land and Building	275	424	590	811
	8,779	11,908	15,426	19,719
8 Non Tax Receipts	1,977	1,569	2,062	2,115
9 Other Oil Receipts		13,477	17,488	21,834
II. Development Receipts	6,158	9,991	9,429	9,905
1 Aid Programs	728	2,041	1,007	1,397
2 Aid Projects	5,430	7,950	8,422	8,508
TOTAL	26,961	32,995	38,169	49,451

Source: Statistical Year Book of Indonesia 1989, 1990, 1991

Table 2.17 Actual Government Routine and Development Expenditures

(Billion RP)

KIND OF EXPENDITURES	1987/1988	1988/1989	1989/1990	1990/1991
I. ROUTINE EXPENDITURES				
1 PERSONNEL EXPENDITURES	4,617	4,998	6,201	7,053
a. Rice allowances	451	518	588	640
b. Salaries and pension	3,561	3,833	4,826	5,570
c. Food allowances	299	327	373	382
d. Other internal personnel expenditures	176	185	243	263
e. External personel expenditures	130	135	171	198
2 MATERIAL EXPENDITURES	1,329	1,492	1,702	1,830
a. material expenditures	1,239	1,378	1,569	1,670
b. External material expenditures	90	114	133	160
3 SUBSIDIES TO AUTONOMOUS REGIC	2,816	3,038	3,566	4,237
a. Personnel Expenditures	2,562	2,779	3,338	3,961
b. Non-Personnel Expenditures	224	259	228	276
4 INTEREST AND DEBTS REPAYMENT	8,205	10,940	11,939	13,395
a. Internal debt	39	77	149	250
b. External debt	8,166	10,863	11,790	13,145
5 OTHERS	515	271	923	3,483
TOTAL (I)	17,482	20,739	24,331	29,998
II. DEVELOPMENT EXPENDITURES				
1 Departments-Institutions	1,385	1,856	2,509	4,317
2 Development subsidy to villages	102	112	112	181
3 Development subsidy to regencies	263	267	270	392
4 Development subsidy to provinces	291	334	324	486
5 Investment through the banking system	57	125	141	75
6 Fertilizer subsidy	756	200	278	155
7 Construction of primary schools	193	130	100	370
8 Regional Development Construction	223	344	478	502
9 /Sanitary Facilities/Public Health Centres	74	99	122	189
10 Construction and rehabilitation of markets	3	3	3	3
11 Replanting and afforestation	16	16	16	33
12 Timor Timur	5	6	-	-
13 Road Facilities	164	180	294	679
14 Others	515	629	765	440
15 Aid Projects	5,430	7,950	8,422	8,834
TOTAL (II)	9,477	12,251	13,834	16,656
TOTAL I + II	26,959	32,990	38,165	46,654

Source : Statistical Year Book of Indonesia 1991,1990,1989

Table 2.18 Development Expenditures by Sector

(Billion RP)

SECTOR	1988/1989	1989/1990	1990/1991
1 Agriculture and Irrigation	1,300	1,994	2,392
2 Industry	234	342	447
3 Mining and Energi	1,217	1,615	1,973
4 Communication and Tourism	1,654	2,522	3,042
5 Trade and Cooperatives	147	200	244
6 Manpower and Transmigration	226	335	556
7 Regional and Local Development	1,032	1,552	1,873
8 Religious	18	27	35
9 Education, Culture and Youth and Belief the Almighty God	1,076	1,683	2,065
10 Health, Family Planning and Social Welfare	289	434	592
11 Peoples dwellings and Resettlement	438	620	729
12 Law	21	29	41
13 Defence and Security	555	813	982
14 Information and Communications	31	46	65
15 Science and Technology, Development research and Statistics	194	279	406
16 Stated Aparatur	72	99	143
17 Development of Business Enterprises	208	291	339
18 Natural Resources and the Environment	176	249	301
Total	8,888	13,130	16,225

Source: Statistical Year Book of Indonesia 1989, 1990, 1991

Table 2.19 Local Government Actual Receipts and Expenditure in 1989/90 by Province

million Rp.

Province	Level I*1		Level II*2		Kelurahan *3		Desa *4	
	Rec.	Exp.	Rec.	Exp.	Rec.	Exp.	Rec.	Exp.
11 Daerah Istimewa Aceh	103,980	96,336	98,201	94,739	4,195	4,195	150,101	149,483
12 Sumatera Utara	275,288	267,151	184,713	177,828	11,200	11,200	161,970	161,469
13 Sumatera Barat	62,751	47,071	131,718	130,471	8,671	8,671	182,985	182,938
14 Riau	114,905	73,657	92,125	86,023	2,966	2,966	50,131	48,794
15 Jambi	37,028	34,033	69,335	67,144	1,983	1,979	48,310	47,930
16 Sumatera Selatan	91,187	72,517	171,891	159,862	6,632	6,632	68,049	67,591
17 Bengkulu	29,340	26,998	35,411	34,005	1,874	1,874	29,309	29,307
18 Lampung	134,724	118,268	61,208	58,189	3,376	3,376	81,012	80,669
31 D.K.I. Jakarta	650,407	650,408	374,548	357,808	75,587	75,583	18,156	15,635
32 Jawa Barat	576,026	529,394	340,426	330,432	122,825	122,665	791,070	790,352
33 Jawa Tengah	534,193	516,384	40,439	38,488	117,126	115,586	1,019,786	1,016,443
34 D.I. Yogyakarta	94,897	87,106	361,281	350,621	16,267	15,740	119,356	117,987
35 Jawa Timur	630,493	598,494	66,467	63,637	79,214	78,987	999,169	994,463
51 Bali	112,598	101,589	82,874	82,486	7,054	7,024	76,045	75,812
52 Nusa Tenggara Barat	34,021	30,398	105,926	102,353	2,645	2,645	48,396	48,396
53 Nusa Tenggara Timur	38,542	35,723	27,293	22,733	2,194	2,194	79,600	78,234
54 Timor Timur	76,034	27,970	59,087	57,219	-	-	-	-
61 Kalimantan Barat	30,149	89,184	49,948	46,802	1,533	1,533	113,908	113,908
62 Kalimantan Selatan	94,226	90,441	45,326	39,254	1,164	1,164	34,182	34,180
63 Kalimantan Tengah	68,166	66,058	99,357	85,693	3,493	3,493	65,797	65,752
64 Kalimantan Timur	92,712	85,780	45,462	44,633	1,822	1,822	35,915	35,915
71 Sulawesi Utara	100,395	106,632	34,496	33,156	6,581	6,581	89,143	88,744
72 Sulawesi Tengah	110,254	66,272	50,737	50,068	762	762	42,962	42,150
73 Sulawesi Tenggara	67,460	24,938	224,299	220,934	725	725	28,590	27,590
74 Sulawesi Selatan	79,999	65,879	76,180	73,808	4,252	4,252	106,783	105,558
81 Maluku	24,938	37,836	78,745	72,500	789	789	64,444	64,172
82 Irian Jaya	46,989	67,915	-	-	-	-		
Indonesia	4,311,702	4,014,432	3,007,493	2,880,886	484,930	482,438	4,505,169	4,483,472

*1 : Level I of autonomous Region (Provincial)
*2 : Level II of autonomous Region (Kabupaten/Kotamadya)
*3 : Urban Village
*4 : Rural Village

Table 2.20 Actual Change in Socio-Economic Situation during Repelita V in Indonesia

Item	Unit	Repelita V 1989/90	1990/91	1991/92	1992/93	1993/94*	Average
National Production 1)							
GDP growth rate	%	6.1	7.6	6.5	5.9	6.0	6.4
Agriculture	%	-1.1	2.2	3.1	3.2	3.0	2.1
Manufacturing Industry	%	10.3	11.2	10.4	8.9	9.1	10.0
Manufacturing without oil/gas	%	13.0	11.2	11.2	9.8	10.0	11.0
Others 2)	%	8.3	8.2	.4.6	6.4	6.0	6.7
GDP growth rate without oil/gas	%	6.7	7.5	6.0	6.9	6.5	6.7
Inflation rate	%	5.5	9.1	9.8	10.0	6.0	8.1
GDP (real)	million US$	97	106	110	123	129	-
GDP (nominal)	million US$	97	110	118	135	147	-
Per capita GDP (real)	US$	549	592	602	662	685	-
Per capita GDP (nominal)	US$	549	614	647	728	776	-
Investment/GDP (nominal) 3) Including Stock Change	%	36.9	38.2	36.7	35.1	34.6	
National savings/GDP (nominal)	%	29.4	29.6	28.9	27.8	27.5	
Balance of Payments							
Export growth rate	%	20.2	18.1	5.5	16.6	11.3	14.3
Non oil and gas	%	18.9	6.1	23.6	27.9	17.2	18.8
Manufacturing 4)	%	25.1	3.4	27.4	30.5	17.0	20.7
Import growth rate	%	21.4	32.5	7.7	12.1	10.9	16.9
Non oil and gas	%	21.3	31.0	11.4	12.9	10.7	17.4
Current account	million US$	-1,599	-3,731	-4,356	-3,264	-3,126	
Cuurent account/GDP	%	-1.6	-3.4	-3.7	-2.4	-2.1	-
Foreign Exchange Reserve	Import months	4.6	5.3	5.3	5.3	5.1	-
Debt/Service ratio	%	33.9	30.8	29.6	28.1	28.1	-
Debt Stock/GDP	%	54.6	56.7	55.9	55.6	54.2	-
Public Finance							
Tax Receipts growth rate	%	29.5	27.8	22.0	21.1	16.2	23.3
Routine Receipts/Total Receipts	%	75.3	80.0	80.0	81.6	83.7	-
Oil and Gas Receipts/Routine Receipts	%	39.2	44.8	36.2	32.3	28.7	-
Tax/Routine Receipts	%	53.7	49.9	57.9	61.4	64.5	-
Tax/GDP without oil and gas	%	10.4	11.4	12.3	12.3	12.6	-
Debt Repayment/Routine Expenditure	%	49.1	44.7	44.4	44.7	46.5	-
Foreign aid/Development Expenditure	%	68.2	56.8	51.4	44.4	41.1	-

Remarks: *: Estimated value; 1) All data is presented based on the 1989/90 constant price.
2) Service sector includes trade, hotel and restaurant, transportation and communication, bankin, etc.
3) Investment includes stock change; 4) Clasification is based on ISIC (International Standard for Industrial Classification.
Source: BAPPENAS

Table 2.21 Projected Macro Socio-Economic Indicator during PJPT II in Indonesia

Item	Repelita V	Repelita VI	Repelita VII	Repelita VIII	Repelita IX	Repelita X
National Production						
GDP growth rate (%)	6.4	6.2	6.6	7.1	7.8	8.7
Agriculture	2.1	3.4	3.5	3.5	3.5	3.5
Industry	10.0	9.2	9.4	9.4	9.1	8.7
Non-oil and gas	11.0	10.3	10.2	10.0	9.5	9.0
Other sectors	6.9	6.0	6.3	6.8	8.0	9.5
Population (last year of each plan period)						
Total Population (million)	189.1	204.4	219.4	233.6	246.5	258.2
Annual average increase rate (%	1.7	1.6	1.4	1.3	1.1	0.9
Per Capita GDP						
In million rupiah, 1989 constant price	1.18	1.47	1.89	2.50	3.45	4.99
In US$, 1989 constant price	685	776	984	1,303	1,797	2,603
Labor Force						
TPAK (Labor force participation rate, %	55.9	57.7	57.9	59.5	61.1	62.1
Economically active Population (million	81.3	93.1	105.7	118.5	130.8	142.8
growth rate (%)	3.1	2.8	2.6	2.3	2.0	1.8
Level of Unemployment (average %	3.2	2.7	2.5	2.3	2.2	2.0
Productivity (US$/people)	1670	1774	2120	2654	3491	4839
growth rate (%)	3.3	3.3	3.9	4.6	5.7	6.8
Sectoral distribution of labor force (million	78.8	90.7	103.2	115.9	128.1	139.9
Agriculture	38.0	39.9	41.1	41.6	41.0	39.8
Industry	9.9	13.0	16.4	20.1	24.4	28.9
Others	30.9	37.9	45.6	54.1	62.8	71.2

Remarks: Working age population is defined as older than 10 years old
Economically active population is defined as those, older than 10 years old, who work or look for work opportunity
TPAK (Tingkat Partisipasi Angkatan Kerja) is defined as the ratio of economically active population to working age populati
Source: BAPPENAS

Table 2.22 Projected Change in Labor Situation during Pelita VI and PJPT II in Indonesia

Item	Unit	Pelita V	Pelita VI					Pelita VII	Pelita VIII	Pelita IX	Pelita X
		1993/94	1994/95	1995/96	1996/97	1997/98	1998/99				
Working age population	million people	145.5	148.9	152.3	155.4	158.4	161.3	176.0	190.4	204.2	217.1
Economically active population rat	%	55.9	56.1	56.4	56.7	57.2	57.7	60.1	62.2	64.1	65.8
Economically active populatio	million people	81.3	83.6	85.9	88.2	90.6	93.1	105.7	118.5	130.8	142.8
increase rate	%	3.1	2.9	2.8	2.7	2.8	2.8	2.6	2.3	2.0	1.8
Unemployment rate	%	3.0	3.0	2.9	2.6	2.6	2.5	2.5	2.3	2.2	2.0
Working population	million people	78.8	81.1	83.5	85.9	88.3	90.7	103.2	115.9	128.1	139.9
Working population distribution by sector	%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Agriculture	%	48.2	47.3	46.4	45.6	44.8	44.0	39.9	35.9	32.0	28.5
Mining and quarrying	%	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Industry	%	12.6	12.9	13.3	13.6	13.9	14.3	15.9	17.4	19.0	20.7
Electricity and gas	%	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Construction	%	4.6	4.8	5.0	5.1	5.3	5.5	6.4	7.1	7.8	8.6
Trade	%	14.9	15.0	15.1	15.2	15.3	15.3	15.9	16.4	16.8	17.0
Transportation and communicatior	%	4.0	4.0	4.1	4.1	4.1	4.2	4.4	4.6	4.9	5.3
Banking	%	1.0	1.0	1.0	1.1	1.1	1.1	1.2	1.3	1.4	1.4
Public service	%	13.4	13.6	13.8	14.0	14.1	14.3	15.0	15.9	16.7	17.2
Productivity	million rupiah /capit	2.8	2.9	3.0	3.1	3.2	3.3	4.0	5.0	6.6	9.2
Increase rate	%	2.7	3.0	3.1	3.2	3.4	3.7	4.0	4.7	5.8	6.9

Figures are of provisional ones.
Source: BAPPENAS

Table 2.23 Projected Macro Socio-Economic Indicator during Repelita VI in Indonesia

Item	Unit	Repelita V		Repelita VI					
		1993/94	Average	1994/95	1995/96	1996/97	1997/98	1998/99	Average
National Production									
GDP growth rate	%	6.0	6.4	6.0	6.0	6.2	6.4	6.6	6.2
Agriculture	%	3.0	2.1	3.3	3.4	3.5	3.5	3.5	3.4
Mining and Quarrying	%	3.0	6.1	3.3	3.4	3.5	3.5	3.5	3.4
Manufacturing Industry	%	9.1	10.0	9.3	9.1	8.9	9.2	9.4	9.2
Manufacturing without oil/gas	%	10.0	11.0	10.0	10.1	10.3	10.5	10.7	10.3
Construction	%	7.5	10.6	8.0	8.0	8.3	8.5	8.7	8.3
Trade	%	6.8	6.6	6.8	6.8	7.0	7.0	7.0	6.9
Communication	%	7.0	8.5	7.4	7.4	7.8	8.0	8.6	7.8
Others	%	4.8	6.2	5.0	5.3	5.5	5.6	5.8	5.4
GDP growth rate without oil/gas	%	6.5	6.7	6.6	6.8	7.0	7.2	7.4	7.0
GDP (real)	million US$	129	-	135	140	146	152	159	-
GDP (nominal)	million US$	147	-	157	168	180	193	208	-
Per capita GDP (real)	US$	685	-	700	716	734	754	776	-
Per capita GDP (nominal)	US$	776	-	816	860	907	959	1018	-
GDP share by sector (1989 constant price, %)									
Agriculture	%	20.1	-	19.6	19.1	18.6	18.1	17.6	-
Manufacturing Industry	%	21.2	-	21.9	22.5	23.1	23.7	24.4	-
Manufacturing without oil/gas	%	17.8	-	18.5	19.2	19.9	20.7	21.5	-
Other sectors	%	58.7	-	58.5	58.4	58.3	58.2	58.0	-
Capital Formation/Investment	Trillion Rp.	101.9	410.4	112.6	125.8	140.5	158.7	179.2	716.7
Government	Trillion Rp.	25.0	100.6	29.6	34.7	40.4	48.3	59.3	212.3
Private	Trillion Rp.	77.0	309.8	83.0	91.1	100.1	110.3	119.8	504.4
ICOR		4.6	4.6	4.5	4.5	4.4	4.4	4.3	4.4
Export growth rate	%	11.3	14.3	12.2	12.3	13.7	13.8	14.6	13.3
Oil and gas	%	-2.8	7.3	1.9	0.0	3.6	1.1	1.2	1.6
Non oil and gas	%	17.2	18.8	15.8	16.1	16.4	16.8	17.4	16.5
Manufacturing	%	17.0	20.7	17.0	17.0	17.2	17.6	18.1	17.4
Current Account/GDP	%	-2.1	-	-1.9	-1.8	-1.6	-1.5	-1.3	-
Debt/Service ratio	%	28.1	-	26.7	25.0	23.2	21.9	20.4	-
Debt Stock/GDP	%	54.2	-	52.5	50.9	49.3	47.6	45.9	-
Foreign Exchange Reserve	Import Months	5.1	-	5.1	5.2	5.3	5.3	5.3	-
Tax/GDP without oil and gas	%	12.6	-	13.4	14.4	15.3	16.7	16.3	-

Source: BAPPENAS

Table 2.24 Regional Development Plan under Repelita V (1/10)

1	Aceh	Policy	Basically to continue and improve the previously program during "PELITA" IV. e.g.: - Family Planning Program - Agriculture Dev. Program in West Coastal area which finally the job opportunities will be created in all sectors.
		Strategy	To conduct the Integrated Development Program such as : - Transportation infrastructure dev. program specially Banda Aceh - Sidikalang N. Sumatera road link line. - The potential isolated area which has high priority ranking on Regional Development Program.
		Problems and Constraint	Population is not evenly distributed imbalance residential area between North & East (inhabited area :65%) while West & South coast only 35%.
		Development Target	- The regional public welfare standard improvement - Rural Development Program for manpower absorption.
		GRDP Growth Rate	- Repelita V is expected mean annual growth rate 4.8% (without oil, gas and its products)
		Priority Sector	- Agriculture sector - Industrial sector
		Land Development Target/Area Harvested (Ha)	Mean annual growth rate (1988-1993) :1.8%
		Irrigation Dev. Target/Yield rate (Qt/Ha) ##	Mean annual growth rate (1988-1993) :3.1%
		Crop production (rice)/ annual growth rate	5 % (Repelita V) while actual progress during PELITA IV were only 1.4 %
		Unemployment rate	1.93 % or 22,000 persons (as of 1985) Repelita V : 3.7% or 1.600,000 persons(labor force age)
2	Sumatra Utara	Policy	Basically to continue and improve the previously program during "PELITA"IV. which finally will achieve public welfare improvement.
		Strategy	To conduct Integrated Development Program
		Problems and Constraint	- Population growth rate is very high - Manpower surplus problems where the working skill and education standard are still low (skill human resources)
		Development Target	- The regional public welfare standard improvement - Rural Development Program for manpower absorption.
		GRDP Growth Rate	- Repelita V is expected mean annual growth rate 5.4% (without oil, gas and its products)
		Priority Sector	- Agriculture sector - Industrial sector
		Land Development Target/Area Harvested (Ha)	Mean annual growth rate 1988-1993) :2.1%
		Irrigation Dev. Target/Yield rate (Qt/Ha) ##	Mean annual growth rate (1988-1993) :2.1%
		Crop production (rice) annual growth rate	4.9 % (Repelita V) while actual progress during PELITA IV were 6.3 %
		Unemployment rate	2.0 % or 69,2000 persons (as of 1985) Repelita V : 3.3% or 4.800,000 persons(labor force age)
3	Sumatra Barat	Policy	Basically to continue and improve the previously program during PELITA IV. which it finally will achieve public welfare improvement.
		Strategy	To conduct Integrated Development Program
		Problems and Constraint	-Population are unevenly distributed where Kabupaten : high density Kabupaten : Tanah Datar, Agam low density Kabupaten : Sawah Lunto ,Sijujung - Mostly the agriculture program are concentrate in both high population Kabupatens - Road and Irrigation infrastructures need to be improved.
		Development Target	- The regional public welfare standard improvement - Rural Development Program for manpower absorption.
		GRDP Growth Rate	- Repelita V is expected mean annual growth rate 5.0% (without oil, gas and its products)

Note : * : GRDP without, gas and its products
: Paddy/rice base
NA : Data are not available

Table 2.24 Regional Development Plan under Repelita V (2/10)

		Priority Sector	- To improve the regional GRDP - To improve the regional public welfare.
		Land Development Target/Area Harvested (Ha) ##	Mean annual growth rate (1988-1993) :1.5%
		Irrigation Dev. Target/ Yield rate (Qt/Ha) ##	Mean annual growth rate (1988-1993) :3.2%
		Crop production (rice)/annual growth rate	4.2 % (Repelita V) while actual progress during PELITA IV were 3.0 %
		Unemployment rate	2.05 % or 27,200 persons (as of 1985) Repelita V : 2.3% or 1,600,000 persons(labor force age)
4	Riau	Policy	Basically to continue and improve the previously program during PELITA IV. which it finally will achieve public welfare improvement.
		Strategy	To conduct Integrated Development Program
		Problems and Constraint	-Population are unevenly distributed where the coastal Kabupatens have high population density - Its still can find the isolated tribe. - Mostly the food crops and estates program are located in east coastal area - Road, sea communication and Irrigation infrastructures are need to be improved.
		Development Target	- The regional public welfare standard improvement - Rural Development Program for manpower absorption.
		GRDP Growth Rate	- Repelita V is expected mean annual growth rate 5.4% (without oil, gas and its products)
		Priority Sector	- Agricultural - Industrial sectors
		Land Development Target/Area Harvested (Ha)	Mean annual growth rate (1988- 1993) :3.7%
		Irrigation Dev. Target/Yield rate (Qt/Ha)	Mean annual growth rate (1988-1993) :2.5%
		Crop production (rice)/annual growth rate	6.2 % (Repelita V) while actual progress during PELITA IV were _2.9 %
		Unemployment rate	3.0 % or 25,800 persons (as of 1985) Repelita V : 4.3% or 1,285,000 persons(labor force age)
5	Jambi	Policy	Basically to continue and improve the previously program during PELITA IV.
		Strategy	To conduct the Integrated Development Program
		Problems and Constraint	Population is not evenly distributed (imbalance residential)
		Development Target	- The regional public welfare standard improvement - Rural Development Program for manpower absorption.
		GRDP Growth Rate	- Repelita V is expected mean annual growth rate 5.2 %
		Priority Sector	- Agricultural sector - Industrial sector
		Land Development Target/Area Harvested (Ha) #	Mean annual growth rate (1988-1993) :2.6%
		Irrigation Dev. Target/Yield rate (Qt/Ha) ##	Mean annual growth rate (1988-1993) :3.2%
		Crop production (rice)/annual growth rate	5.8 % (Repelita V) while actual progress during PELITA IV were only 1.3 %
		Unemployment rate	1.67 % or 10,584 persons (as of 1985) Repelita V : 5.0% or 997,000 persons(labor force age)
6	Sumatera Selatan	Policy	Basically to continue and improve the previously program during PELITA IV.
		Strategy	To conduct the Integrated Development Program
		Problems and Constraint	Population is not evenly distributed (imbalance residential)
		Development Target	- The regional public welfare standard improvement - Rural Development Program for manpower absorption.
		GRDP Growth Rate	Target Repelita V : 5.1% /year* Actual Pelita IV : 3.8%/year* (as of 1983-1986)

Note : * : GRDP without, gas and its products
: Paddy/rice base
NA : Data are not available

Table 2.24 Regional Development Plan under Repelita V (3/10)

		Priority Sector	- Agricultural sector - Industrial sector
		Land Development Target/Area Harvested (Ha) #	Mean annual growth rate (1988-1993) :1.6%
		Irrigation Dev. Target/Yield rate (Qt/Ha) #	Mean annual growth rate (1988-1993) :3.3%
		Crop production (rice)/annual growth rate	4.9 % (Repelita V) while actual progress "PELITA"IV .
		Unemployment rate	2.32 % or 46,000 persons (as of 1985) Repelita V : 4.3% or 2,900,000 persons(labor force age)
7	Bengkulu	Policy	Basically to continue and improve the previously program during PELITA IV.
		Strategy	To conduct the Integrated Development Program
		Problems and Constraint	- Total population is relatively if it's compared with the natural potential resources - Limitation of Road and Irrigation infrastructure
		Development Target	- The regional public welfare standard improvement - Rural Development Program for manpower absorption.
		GRDP Growth Rate	Target Repelita V : 6.0% /year* Actual Pelita IV : 6.8%/year* (as of 1983-1986)
		Priority Sector	- Agricultural sector - Industrial sector
		Land Development Target/Area Harvested (Ha)	Mean annual growth rate (1988-1993) :2.8%
		Irrigation Dev. Target/Yield rate (Qt/Ha) ##	Mean annual growth rate (1988-1993) :3.1%
		Crop production (rice)/annual growth rate	5.9 % (Repelita V) while annual progress during Pelita IV : 0.1 %
		Unemployment rate	4.1 % or 15,650 persons (as of 1985) Repelita V : 5.9% or 661,000 persons(labor force age)
8	Lampung	Policy	Basically to continue and improve the previously program during PELITA IV.
		Strategy	To conduct the Integrated Development Program
		Problems and Constraint	- Population are unevenly distributed where 76% located in western and central part while 24 % located in northern part.
		Land Development Target/Area Harvested (Ha) ##	Mean annual growth rate (1988-1993) :1.4%
		Irrigation Dev. Target/Yield rate (Qt/Ha) ##	Mean annual growth rate (1988-1993) :3.0%
		Crop production (rice)/annual growth rate	Mean annual growth rate (1988-1993) :3.0%
		Priority Sector	- Agricultural sector - Industrial sector
		Crop production (rice)/annual growth rate	Repelita V :4.4 (Pelita IV :7.1 %)
		Unemployment rate	1.2 % or 27,000 persons (as of 1985) Repelita V : 6.5% or 3,000,000 persons(labor force age)
9	DKI- Jakarta	Policy	Basically to continue and improve the previously program during PELITA IV.
		Strategy	- To conduct the Integrated Development Program - General Mater Plan of Jakarta 1985-2005 as the development basic guidance.
		Problems and Constraint	- Population growth rate is very high as the impact of the urbanization (urban migrant). - land space problem.

Note : * : GRDP without, gas and its products
: Paddy/rice base
NA : Data are not available

Table 2.24 Regional Development Plan under Repelita V (4/10)

		Development Target	- To be directed To support the national economic program. - The public life welfare improvement.
		GRDP Growth Rate	Target Repelita V :6.8% /year* Actual Pelita IV : 5.9%/year* (as of 1983-1986)
		Priority Sector	- Industrial sector - Trading sector
		Land Development Target/Area Harvested (Ha)	Mean annual growth rate (1988-1993) :0.5%
		Irrigation Dev. Target/Yield rate (Qt/Ha)	Mean annual growth rate (1988-1993) :1.9%
		Crop production (rice)/annual growth rate	Repelita V : 2.5% (Pelita IV : 4.1%
		Unemployment rate	5.6 % or 143,410 persons (as of 1985) Repelita V : 4.6% or 3,800,000 persons(labor force age)
10	Jawa Barat	Policy	Basically to continue and improve the previously program during PELITA IV.
		Strategy	To conduct the Integrated Development Program
		Problems and Constraint	- The population growth rate is still high. - Low skill manpower surplus.
		Development Target	- Regional GRDP improvement - The public life welfare improvement
		GRDP Growth Rate	Target Repelita V :7.2% /year* Actual Pelita IV : 10.3%/year* (as of 1983-1986)
		Priority Sector	- Industrial sector - Agricultural sector
		Land Development Target/Area Harvested (Ha) ##	Mean annual growth rate (1988-1993) :0.3%
		Irrigation Dev. Target/Yield rate (Qt/Ha) ##	Mean annual growth rate (1988-1993) :2.4%
		Crop production (rice)/annual growth rate	Repelita V : 2.7 (Pelita IV : 4.5)
		Unemployment rate	3.0 % or 322,000 (as of 1985) Repelita V : 2.8 % or 14,400,000 persons(labor force age)
11	Jawa Tengah	Policy	Basically to continue and improve the previously program during PELITA IV.
		Strategy	To conduct the Integrated Development Program
		Problems and Constraint	- The population growth rate is still high. - Low skill manpower surplus.
		Development Target	- Regional GRDP improvement - The public life welfare improvement
		GRDP Growth Rate	Target Repelita V :5.4% /year* Actual Pelita IV : 6.9%/year* (as of 1983-1986)
		Priority Sector	- Industrial sector - Agricultural sector
		Land Development Target/Area Harvested (Ha) ##	Mean annual growth rate (1988-1993) :0.2%
		Irrigation Dev. Target/Yield rate (Qt/Ha) #	Mean annual growth rate (1988-1993) :1.8%
		Crop production (rice)/annual growth rate	Repelita V : 2.0% (Pelita IV : 3.9%)
		Unemployment rate	1.6% or 182,000 persons Repelita V : 1.9 % or 14,700,000 persons(labor force age)
12	D.I Jogjakarta	Policy	Basically to continue and improve the previously program during PELITA IV.
		Strategy	To conduct the Integrated Development Program
		Problems and Constraint	- The population growth rate is still high. - Low skill manpower surplus.
		Development Target	- Regional GRDP improvement - The public life welfare improvement

Note : * : GRDP without, gas and its products
: Paddy/rice base
NA : Data are not available

Table 2.24 Regional Development Plan under Repelita V (5/10)

		GRDP Growth Rate	Target Repelita V :5.1% /year* Actual Pelita IV : 4.5%/year* (as of 1983-1986)
		Priority Sector	- Industrial sector - Agricultural sector
		Land Development Target/Area Harvested (Ha) ##	Mean annual growth rate (1988-1993) :0.5%
		Irrigation Dev. Target/Yield rate (Qt/Ha) ##	Mean annual growth rate (1988-1993) :2.3%
		Crop production (rice)/annual growth rate	Repelita V : 2.8% (Pelita IV: 0.6%)
		Unemployment rate	1.9 % or 28,000 persons (as of 1985) Repelita V : 2.3 % or 203,000 persons(labor force age)
13	Jawa Timur	Policy	Basically to continue and improve the previously program during PELITA IV.
		Strategy	To conduct the Integrated Development Program
		Problems and Constraint	- The population growth rate is still high. - Low skill manpower surplus.
		Development Target	- Regional GRDP improvement - The public life welfare improvement
		GRDP Growth Rate	Target Repelita V :5.6% /year* Actual Pelita IV : 5.4%/year* (as of 1983-1986)
		Priority Sector	- Industrial sector - Agricultural sector
		Land Development Target/Area Harvested (Ha) ##	Mean annual growth rate (1988-1993) :0.2%
		Irrigation Dev. Target/Yield rate (Qt/Ha)	Mean annual growth rate (1988-1993) :1.7%
		Crop production (rice)/annual growth rate	Repelita V :1.9 (Pelita IV: 1.5)
		Unemployment rate	1.6% or 219,000 (as of 1985) Repelita V : 1.5 % or 16,100,000 persons(labor force age)
14	Kalimantan Barat	Policy	Basically to continue and improve the previously program during PELITA IV.
		Strategy	To conduct the Integrated Development Program
		Problems and Constraint	- Low population density against the exist natural potential - The population is unevenly distributed where they formed in many small groups.
		Development Target	- Regional GRDP improvement - The public life welfare improvement
		GRDP Growth Rate	Target Repelita V :6.4% /year* Actual Pelita IV :4.7%/year* (as of 1983-1986)
		Priority Sector	- Industrial sector - Agricultural sector
		Land Development Target/Area Harvested (Ha) ##	Mean annual growth rate (1988-1993) :1.9%
		Irrigation Dev. Target/Yield rate (Qt/Ha) ##	Mean annual growth rate (1988-1993) :3.3%
		Crop production (rice)/annual growth rate	Repelita V 5.9% (Pelita IV: 0.6%)
		Unemployment rate	N.A Repelita V : 4.3 % or 1,700,000 persons(labor force age)
15	Kalimantan Tengah	Policy	Basically to continue and improve the previously program during PELITA IV.
		Strategy	To conduct the Integrated Development Program
		Problems and Constraint	- Low population density against the exist natural potential - The population is unevenly distributed where they formed in many small groups.
		Development Target	- Regional GRDP improvement - The public life welfare improvement

Note : * : GRDP without, gas and its products
: Paddy/rice base
NA : Data are not available

Table 2.24 Regional Development Plan under Repelita V (6/10)

		GRDP Growth Rate	Target Repelita V :4.9% /year* Actual Pelita IV :4.4%/year* (as of 1983-1986)
		Priority Sector	- Industrial sector - Agricultural sector
		Land Development Target/Area Harvested (Ha) ##	Mean annual growth rate (1988-1993) :3.4%
		Irrigation Dev. Target/Yield rate (Qt/Ha) ##	Mean annual growth rate (1988-1993) :5.8%
		Crop production (rice)/annual growth rate	Repelita V: 5.8% (PELITA IV :1.8%)
		Unemployment rate	Repelita V : 5.4 % or 716,000 persons(labor force age)
16	Kalimantan Selatan	Policy	Basically to continue and improve the previously program during PELITA IV.
		Strategy	To conduct the Integrated Development Program
		Problems and Constraint	- Low population density against the exist natural potential - The population is unevenly distributed where they formed in many small groups. - Lack of communication and irrigation infrastructure
		Development Target	- Regional GRDP improvement - The public life welfare improvement
		GRDP Growth Rate	Target Repelita V :5.1% /year* Actual Pelita IV :4.6%/year* (as of 1983-1986)
		Priority Sector	- Industrial sector - Agricultural sector
		Land Development Target/Area Harvested (Ha) ##	Mean annual growth rate (1988-1993) :1.4%
		Irrigation Dev. Target/Yield rate (Qt/Ha) ##	Mean annual growth rate (1988-1993) :2.9%
		Crop production (rice)/annual growth rate	Repelita V: 4.5 % (PELITA IV :3.5%)
		Unemployment rate	1.9% or 17,600 persons (as of 1985) Repelita V : 3.8 % or 1,400,000 persons(labor force age)
17	Kalimantan Timur	Policy	Basically to continue and improve the previously program during PELITA IV.
		Strategy	To conduct the Integrated Development Program
		Problems and Constraint	- Low population density against the exist natural potential - The population is unevenly distributed where they formed in some small groups. - Lack of communication and irrigation infrastructures
		Development Target	- Regional GRDP improvement - The public life welfare improvement
		GRDP Growth Rate	Target Repelita V :6.1% /year* Actual Pelita IV :8.7%/year* (as of 1983-1986)
		Priority Sector	- Industrial sector - Agricultural sector
		Land Development Target/Area Harvested (Ha) ##	Mean annual growth rate (1988-1993) :2.7%
		Irrigation Dev. Target/Yield rate (Qt/Ha) ##	Mean annual growth rate (1988-1993) :2.7%
		Crop production (rice)/annual growth rate	Repelita V : 5.5 % (Pelita IV : 22 %)
		Unemployment rate	4.7 % or 25,800 persons (as of 1985) Repelita V : 6.0 % or 952,000 persons(labor force age)
18	Sulawesi Utara	Policy	Basically to continue and improve the previously program during PELITA IV.
		Strategy	To conduct the Integrated Development Program
		Problems and Constraint	- The population is unevenly distributed where 76% are located in eastern area and 24 % are located in western area

Note : * : GRDP without, gas and its products
: Paddy/rice base
NA : Data are not available

Table 2.24 Regional Development Plan under Repelita V (7/10)

		Development Target	- Regional GRDP improvement - The public life welfare improvement
		GRDP Growth Rate	Target Repelita V :5.1% /year* Actual Pelita IV :1.8%/year* (as of 1983-1986)
		Priority Sector	- Industrial sector - Agricultural sector
		Land Development Target/Area Harvested (Ha)	Mean annual growth rate (1988-1993) :4.7%
		Irrigation Dev. Target/Yield rate (Qt/Ha) ##	Mean annual growth rate (1988-1993) :3.0.%
		Crop production (rice)/annual growth rate	Repelita V :8.2% (Pelita IV : 5.2 %)
		Unemployment rate	N.A Repelita V : 4.2 % or 1.200,000 persons(labor force age)
19	Sulawesi Tengah	Policy	Basically to continue and improve the previously program during PELITA IV.
		Strategy	- To conduct the Integrated Development Program - Undeveloped area should be put on first priority.
		Problems and Constraint	- The population is unevenly distributed where 65.3% are located in central part and 21.3% are located in eastern area while 13.4% located in northern area.
		Development Target	- Regional GRDP improvement - The public life welfare improvement
		GRDP Growth Rate	Target Repelita V :5.6% /year* Actual Pelita IV :4.4%/year* (as of 1983-1986)
		Priority Sector	- Industrial sector - Agricultural sector
		Land Development Target/Area Harvested (Ha) #	Mean annual growth rate (1988-1993) :3.2%
		Irrigation Dev. Target/Yield rate (Qt/Ha) ##	Mean annual growth rate (1988-1993) :7.6.%
		Crop production (rice)/annual growth rate	Repelita V : 7.6% (Pelita IV: 3.4%)
		Unemployment rate	1.21% or 6,821 persons (as of 1985) N.A
20	Sulawesi Tenggara	Policy	Basically to continue and improve the previously program during PELITA IV.
		Strategy	- To conduct the Integrated Development Program - Undeveloped area should be put on first priority.
		Problems and Constraint	- The population is unevenly distributed (imbalance) - Low population density if it compared against exist potential - Lack of communication infrastructure
		Development Target	- Regional GRDP improvement - The public life welfare improvement
		GRDP Growth Rate	Target Repelita V :6.6% /year* Actual Pelita IV :6.3%/year* (as of 1983-1986)
		Priority Sector	- Industrial sector - Agricultural sector
		Land Development Target/Area Harvested (Ha)	Mean annual growth rate (1988-1993) :2.8%
		Irrigation Dev. Target/Yield rate (Qt/Ha) ##	Mean annual growth rate (1988-1993) :3.5.%
		Crop production (rice)/annual growth rate	Repelita V: 5.7 (Pelita IV:5.6%)
		Unemployment rate	N.A Repelita V : 5.1 % or 668,000 persons(labor force age)
21	Sulawesi Selatan	Policy	Basically to continue and improve the previously program during PELITA IV.
		Strategy	- To conduct the Integrated Development Program - Undeveloped area should be put on first priority.

Note : * : GRDP without, gas and its products
: Paddy/rice base
NA : Data are not available

Table 2.24 Regional Development Plan under Repelita V (8/10)

		Problems and Constraint	- The population is unevenly distributed (imbalance) - Low population density if it compared against exist potential - Communication infrastructure.
		Development Target	- Regional GRDP improvement - The public life welfare improvement
		GRDP Growth Rate	Target Repelita V :4.9% /year* Actual Pelita IV :5.7%/year* (as of 1983-1986)
		Priority Sector	- Industrial sector - Agricultural sector
		Land Development Target/Area Harvested (Ha) ##	Mean annual growth rate (1988-1993) :0.8%
		Irrigation Dev. Target/Yield rate (Qt/Ha) ##	Mean annual growth rate (1988-1993) :2.8.%
		Crop production (rice)/annual growth rate	Repelita V: 3.7% (Pelita IV: 3.9%)
		Unemployment rate	2.6 % or 54,140 persons (as of 1985) Repelita V : 3.0 % or 2,700,000 persons(labor force age)
22	Bali	Policy	Basically to continue and improve the previously program during PELITA IV.
		Strategy	- To conduct the Integrated Development Program - On making urban master plan has to support the tourism sub sector.
		Problems and Constraint	- Manpower surplus in urban area. - High growth rate of population. - The population is unevenly distributed.
		Development Target	- Regional GRDP improvement - The public life welfare improvement
		GRDP Growth Rate	Target Repelita V :6.3% /year* Actual Pelita IV :7.9%/year* (as of 1983-1986)
		Priority Sector	- Industrial sector - Agricultural sector
		Land Development Target/Area Harvested (Ha) ##	Mean annual growth rate (1988-1993) :1.3%
		Irrigation Dev. Target/Yield rate (Qt/Ha) ##	Mean annual growth rate (1988-1993) :1.4.%
		Crop production (rice)/annual growth rate	Repelita V 2.7% (Pelita IV: 2.3%)
		Unemployment rate	1.4% or 18,000 persons (as of 1985) Repelita V : 3.1 % or 1.700,000 persons(labor force age)
23	NTB	Policy	Basically to continue and improve the previously program during PELITA IV.
		Strategy	- To conduct the Integrated Development Program - On making urban master plan has to support the tourism sub sector.
		Problems and Constraint	- Mostly crops food farming located in Lombok island - The population is unevenly distributed for both islands where Lombok 71.7% and the rest are located in Sumbawa.
		Development Target	- Regional GRDP improvement - The public life welfare improvement
		GRDP Growth Rate	Target Repelita V :4.8% /year* Actual Pelita IV :6.4%/year* (as of 1983-1986)
		Priority Sector	- Industrial sector - Agricultural sector
		Land Development Target/Area Harvested (Ha) ##	Mean annual growth rate (1988-1993) :1.1%
		Irrigation Dev. Target/Yield rate (Qt/Ha) ##	Mean annual growth rate (1988-1993) :2.3.%
		Crop production (rice)/annual growth rate	Repelita : 3.5 % (Pelita IV: 2.2%)
		Unemployment rate	1.8 % or 19,058 persons (as of 1985) Repelita V : 3.6 % or 1.700,000 persons(labor force age)

Note : * : GRDP without, gas and its products
: Paddy/rice base
NA : Data are not available

Table 2.24 Regional Development Plan under Repelita V (9/10)

24	NTT	Policy	Basically to continue and improve the previously program during PELITA IV.
		Strategy	- To conduct the Integrated Development Program - To conduct intensification, diversification, rehabilitation and extension of farming program
		Problems and Constraint	- Dry land farming program is need for the specific labor force. - The manpower is unevenly distributed. - Topographical condition of the area is mountainous.
		Development Target	- Regional GRDP improvement - The public life welfare improvement
		GRDP Growth Rate	Target Repelita V :2.1% /year* Actual Pelita IV :4.6%/year* (as of 1983-1986)
		Priority Sector	- Industrial sector - Agricultural sector
		Land Development Target/Area Harvested (Ha) ##	Mean annual growth rate (1988-1993) :1.3%
		Irrigation Dev. Target/Yield rate (Qt/Ha) ##	Mean annual growth rate (1988-1993) :3.2.%
		Crop production (rice)/annual growth rate	Repelita V: 4.5% (Pelita IV: 3.7%)
		Unemployment rate	N.A Repelita V : 3.5 % or 1.900,000 persons(labor force age)
25	Maluku	Policy	Basically to continue and improve the previously program during PELITA IV.
		Strategy	- To conduct the Integrated Development Program - To conduct intensification, diversification, rehabilitation and extension of farming program
		Problems and Constraint	- The population is unevenly distributed where mostly concentrated in small islands (by 75%) - Geographical condition consist of some island
		Development Target	- Regional GRDP improvement - The public life welfare improvement (food self sufficiency)
		GRDP Growth Rate	Target Repelita V: 5.3% Actual Pelita IV :6.9%/year* (as of 1983-1986)
		Priority Sector	- Industrial sector - Agricultural sector
		Land Development Target/Area Harvested (Ha) ##	Mean annual growth rate (1988-1993) :9.0%
		Irrigation Dev. Target/Yield rate (Qt/Ha) ##	Mean annual growth rate (1988-1993) :2.0.%
		Crop production (rice)/annual growth rate	Repelita V: 11.2% (Pelita IV: 3.7%)
		Unemployment rate	1.8% or 9,806 persons (as of 1985) Repelita V : 4.8 % or 811,000 persons(labor force age)
26	Irian Jaya	Policy	Basically to continue and improve the previously program during PELITA IV.
		Strategy	- To conduct the Integrated Development Program - To conduct intensification, diversification, rehabilitation and extension of farming program
		Problems and Constraint	- The population is unevenly distributed for all the island where 22.7% concentrated at coastal area,37,1% located high plain and 40.2% are spread in large wide area. - Lack of skill human resources.(for farming program)
		Development Target	- Regional GRDP improvement - The public life welfare improvement
		GRDP Growth Rate	Target Repelita V : 6.2% Actual Pelita IV :4.5%/year* (as of 1983-1986)
		Priority Sector	- Industrial sector - Agricultural sector
		Land Development Target/Land Development Target	Mean annual growth rate (1988-1993) :14.5%

Note : * : GRDP without, gas and its products
: Paddy/rice base
NA : Data are not available

Table 2.24 Regional Development Plan under Repelita V (10/10)

		Irrigation Dev. Target/Yield rate (Qt/Ha) ##	Mean annual growth rate (1988-1993) :0.1.%
		Crop production (rice)/annual growth rate	Repelita V: 14.6 % (Pelita IV: 5.8%)
		Unemployment rate	Repelita V : 4.8 % or 826,000 persons(labor force age)
27	Timor Timur	Policy	Basically to continue and improve the previously program during PELITA IV.
		Strategy	- To conduct the Integrated Development Program - To conduct intensification, diversification, rehabilitation and extension of farming program
		Problems and Constraint	- The population is unevenly distributed where mostly located in northern and western coast of Timor island. - Lack of communication infrastructure
		Development Target	- Regional GRDP improvement - The public life welfare improvement
		GRDP Growth Rate	Target Repelita V : 5.0% Actual Pelita IV :6.3%/year* (as of 1983-1986)
		Priority Sector	- Industrial sector - Agricultural sector
		Land Development Target/Area Harvested (Ha)	Mean annual growth rate (1988-1993) :2.2%
		Irrigation Dev. Target/Yield rate (Qt/Ha) ##	Mean annual growth rate (1988-1993) :2.7%
		Crop production (rice)/annual growth rate	Repelita V : 4.9% (Pelita IV : data is not available)
		Unemployment rate	0.55 % or 1,443 persons. Repelita V : 3.7 % or 347,000 persons(labor force age)

Sources 1. Rencana Pembangunan Lima Tahun Kelima (189/90-1993/94)
2. Repelita V Pertanian (Jakarta,1990)

Note 1/. Labor force age :The population age 10 years and over who work or looking for work
2/. Unemployment : Persons in labor force age, do not have any jobs and looking for job (out of work)

Note : * : GRDP without, gas and its products
: Paddy/rice base
NA : Data are not available

Table 2.25 Priority Program and its Prospective Sectors for Repelita VI

Province	Program No.	Industry	Agriculture	Estate	Tourism
D.I. Aceh	1		✔		✔
	2	✔			
	3		✔		
Sumatera Utara	1	✔		✔	✔
	2	✔	✔	✔	✔
	3				
	4	✔		✔	
Sumatera Barat	1	✔			
	2				✔
	3				
Riau	1	✔	✔		
	2	✔			
	3	✔			✔
Jambi	1	✔		✔	
	2			✔	
Sumatera Selatan	1	✔			
	2				
	3	✔			
	4				
Bengkulu	1	✔		✔	
	2				
Lampung	1	✔		✔	
	2	✔	✔		
D.K.I. Jakarta		✔			✔
Jawa Barat	1	✔			
	2	✔	✔		✔
	3	✔	✔		✔
	4		✔		✔
	5	✔	✔		
	6				✔
	7				
Jawa Tengah	1	✔	✔		
	2	✔	✔		
	3	✔	✔		
D.I. Yogyakarta		✔	✔		✔
Jawa Timur	1	✔	✔		
	2				
	3	✔	✔		✔
	4	✔	✔		
	5		✔		✔
Bali	1		✔		✔
	2				✔

Province	Program No.	Industry	Agriculture	Estate	Tourism
Nusa Tenggara Barat	1	✔	✔		✔
	2				
Nusa Tenggara Timur	1	✔		✔	
	2				
	3				
Timor Timur				✔	
Kalimantan Barat	1	✔		✔	
	2		✔	✔	
	3	✔		✔	✔
	4				
	5				
Kalimantan Tengah	1			✔	
	2	✔	✔		
	3				
	4	✔		✔	
	5				
Kalimantan Selatan		✔		✔	
Kalimantan Timur	1	✔			
	2	✔		✔	
	3	✔		✔	
Sulawesi Utara	1		✔	✔	
	2	✔		✔	✔
	3				
Sulawesi Tengah	1		✔	✔	
	2				
	3				
Sulawesi Selatan	1	✔	✔		✔
	2				
	3		✔		✔
Sulawesi Tenggara	1	✔	✔		
	2			✔	
Maluku	1			✔	✔
	2		✔		
	3				
Irian Jaya	1			✔	✔
	2		✔		
	3		✔		✔
	4				
	5	✔		✔	✔
	6				
	7				

Source : Arahan Struktur dan Pola Tata Ruang Nasional salah satu komponen dari Strategi Nasional Pengemgangan Pola Tata Ruang (STPPTR), DRAFT I ,1992, CIPTA KARYA

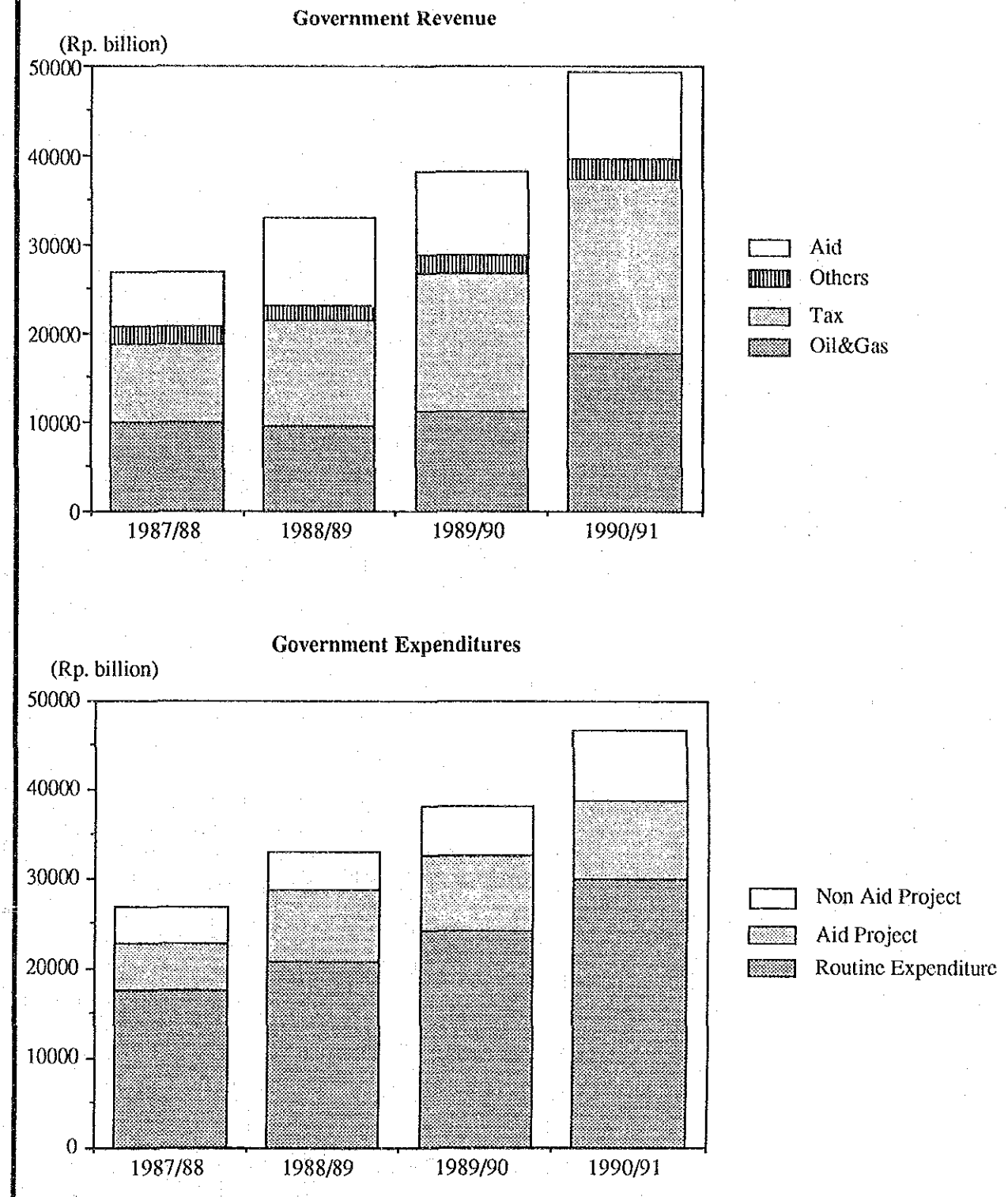


Figure 2.1 Trend of the Government Budget

MINISTRY OF PUBLIC WORKS
FORMULATION OF
IRRIGATION DEVELOPMENT PROGRAM
JAPAN INTERNATIONAL COOPERATION AGENCY

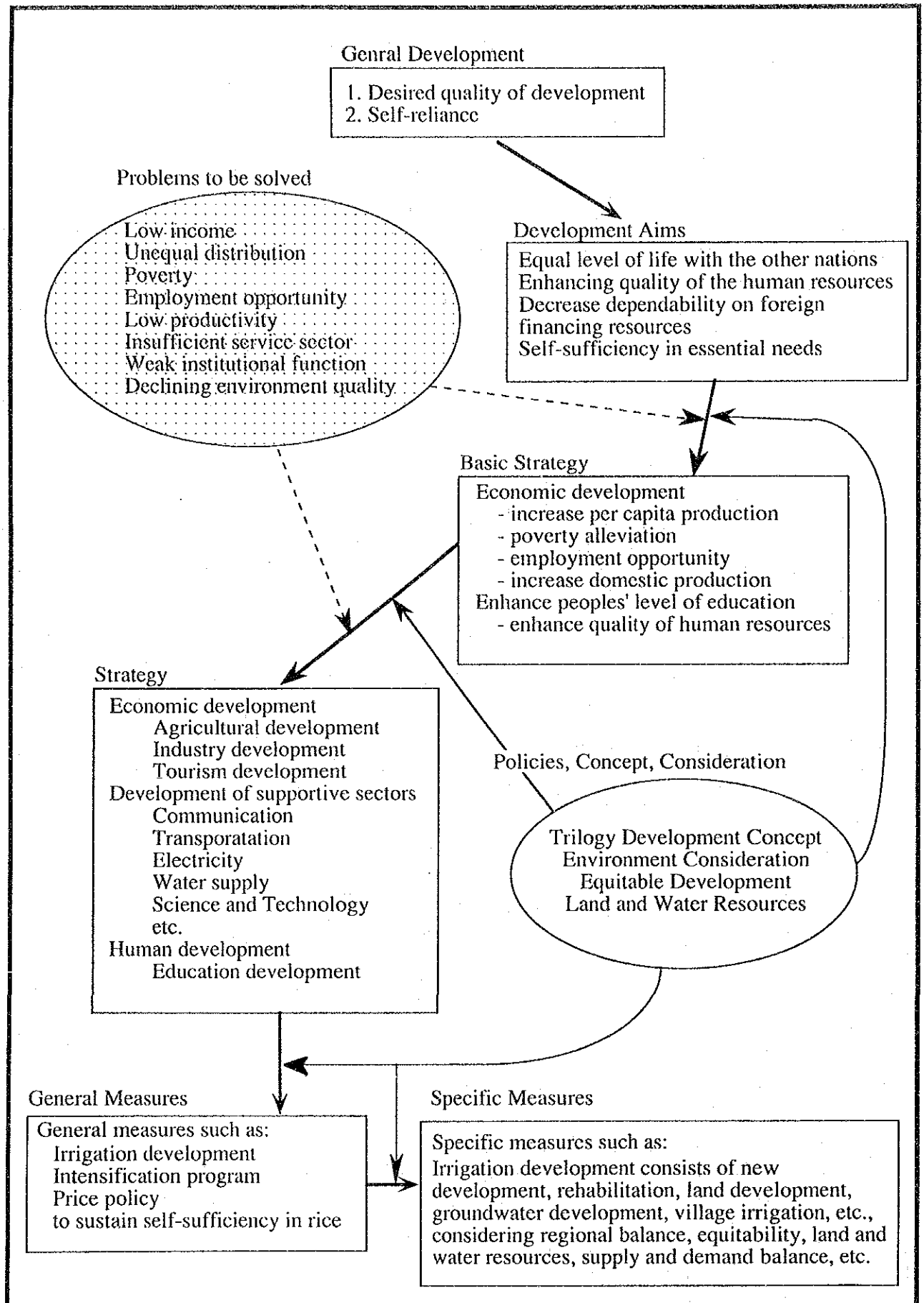


Figure 2.2 Conceptual Flow of the Formulation of Development Plan

MINISTRY OF PUBLIC WORKS
FORMULATION OF IRRIGATION DEVELOPMENT PROGRAM
JAPAN INTERNATIONAL COOPERATION AGENCY

Chapter 3

3. LAND AND WATER POTENTIAL

In the case irrigation development is justified, natural resources, namely land and water resources which are the fatal limiting factors on planning of irrigation development should be examined. The Ministry of Public Works gives the eight criteria including land and water resources to be evaluated for irrigation development planning. From the view point of human life, these resources are also fundamental.

3.1 Land Potential

Land suitability analysis was carried out first for the whole Indonesia. Then, land availability was analyzed on the basis of present land use and land status. The combined results of the above analyses provide further potential of wetland agriculture development from viewpoint of physical land conditions.

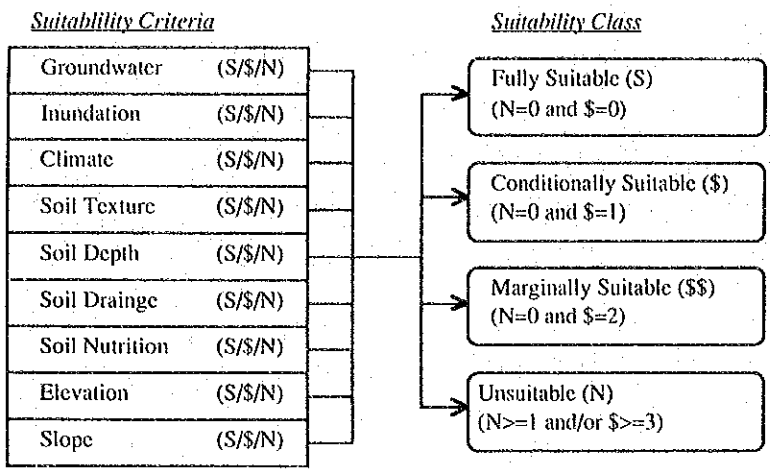
Through examination of the existing data, Regional Physical Planning Programme for Transmigration (RePPProT) study undertaken by Ministry of Transmigration under bilateral cooperation program with Overseas Development Administration, United of Kingdom was judged to be the most relevant and fundamental data source, since it is the only study which deals with nationwide land evaluation by adopting an integrated land unit approach, not only soil type, in Indonesia. We therefore used the primary data of the RePPProT study as the basis for the study.

3.1.1 Land Suitability Analysis

(1) Procedure of land suitability evaluation

Land suitability for wetland agriculture development (paddy cultivation) is assessed on the basis of nine out of eleven suitability criteria adopted by the RePPProT study. The nine suitability indexes, which are evaluated on the dominant (more than 60%) characteristics of each land system, define the land suitability class of the land system. Each factor is classified into three suitability classes by certain criteria; suitable, conditionally suitable and unsuitable for its difficulty of development. The concept of the land suitability study in the FIDP study is illustrated in following figure, and the criteria and evaluation process are explained later.

General Concept of Land Suitability Study



The items of Potable water and Fragmentation, which are used for specified development potential study of the RePPProT, are excluded from the criteria as our study is focused on wetland agriculture development and those two criteria are not important factors.

(2) Criteria adopted

Items and limitations of land suitability criteria are presented in Table 3.1 and briefly explained as follows.

Groundwater quality (G):

A distinction is made between: not available, fresh, brackish/sulphurous and saline. Presence of brackish/sulphurous or saline groundwater is considered to limit the suitability of the land system for paddy cultivation for its excessive salinity.

Inundated land (I):

The parameters are given in the data sets: the risk of flooding, the sediment load of the flood water and the risk of inundation. Areas commonly or frequently flooded by waters containing high sediment loads or subject to permanent or tidal inundation are thought to be unsuitable for paddy cultivation.

Climate (C):

The climate classification is based on the average annual amount of rainfall and the number of wet (> 200 mm) and dry (< 100 mm) months, in combination with the length of the growing period and the minimum and maximum temperature. Paddy cultivation is possible if the average annual rainfall ranges between 1,000 and 5,000 mm. The dry

period should be no more than 7 months and there have to be at least 4 wet months. The growing period has to be more than 100 days and the temperature is allowed to range among 15 and 34 C°.

Soil texture (T):

Six soil texture classes of the top 25 cm of the soil are distinguished, which are fine, moderately fine, medium, moderately coarse, coarse, and organic textures. Only soils having a coarse texture are considered not suitable for paddy cultivation in relation to excessive drainage and low nutrient holding capacity.

Soil Depth (D):

Although both peat and mineral soil are classified according to their depth for the suitability assessment, separate criteria are used for the two types of soil. Peat soils deeper than 75 cm from surface are considered unsuitable for paddy cultivation because of formidable difficulties to be reclaimed. Mineral soils less than 25 cm deep are considered unsuitable because such shallow rooting zone often cause water and nutrition stresses.

Soil drainage (W):

A distinction between excessively, well to moderately well, imperfectly, poorly and very poorly drained soils is made. For paddy cultivation soils have to be imperfectly to very poorly drained.

Soil nutrition (N):

The soil nutrient status of the top 25 cm of the soil is described with the following parameters: exchangeable potassium (K), available and total phosphorus (P) and the cation exchange capacity (CEC). Furthermore a number of potentially limiting soil chemical characteristics is given: the pH(H_2O) value, Aluminum (Al) saturation, the depth to acid sulphate layer, the salinity of the soil and whether or not the parent material of the soil is ultrabasic. Land systems suitable for paddy cultivation should have CEC values higher than 5 meq/100g soil, pH values lower than 7.9 and a salinity (EC) below 4.0 mS/cm. The presence of an acid sulphate layer within 25 cm from the soil surface, and quartzic or ultrabasic parent material makes the soil unsuitable for paddy cultivation. Land systems with low exchangeable K, available P or total P or with high Al saturation or exchangeable Al are considered as conditionally suitable (refer to Table 3.1).

Elevation (L):

Elevation above 1,500 m (annual average temperature below 18.7 C°) are thought to be unsuitable for paddy cultivation for its cool.

Slope (S):

Land slope classes are distinguished as flat (< 2 %), very gentle (2-8 %), gentle (9-15 %), moderately steep (16-25 %), steep (26-40 %), very steep (41-60 %) and extremely steep (> 60 %). Only flat areas are considered to be suitable for paddy cultivation. Very gentle to moderately steep areas are considered as conditionally suitable areas. As for volcanic soils of Jawa, even steep and very steep areas are also included in conditionally suitable areas because high population pressure has already enforced cultivation on some parts of such lands.

The nine characteristics of each land system are examined and categorized as suitable (S), conditionally suitable ($) or unsuitable (N).

(3) Suitability classification

After that, each land system is classified into four groups, i.e., fully suitable (S), conditionally suitable ($), marginally suitable ($$) and unsuitable (N).

As a result of combination of the nine suitability examinations, land suitability classes of land systems are defined as follows.

Fully suitable (S):

Land on which sustained use of the type considered is expected to yield benefits sufficient to justify the required inputs without unacceptable risk of damage to land resources. "Suitable" indicates that 60 to 100 % of the land systems is suitable for the specified land utilization type. Suitable land systems may include up to 40 % of unsuitable land. The type of land systems does not have any N or $ factors within the nine suitability criteria.

Conditionally suitable ($):

Land which requires additional inputs to make it suitable for sustained use of the types under consideration inputs may include soil and water conservation measures, bench terracing, water control, estate management, fertilizer, infrastructure, etc. Conditionally suitable land systems may also include up to 40 % of unsuitable land. The land systems are distinguished as one $ character of the nine suitability criteria.

Marginally suitable ($$):

Land which requires more inputs to solve double constraints for paddy cultivation development. Marginally suitable land systems may also include up to 40 % of unsuitable land. The land systems distinguished as two $ factors of the nine suitability criteria.

Unsuitable (N):

Land with qualities that appear to preclude sustained use types under consideration. "Unsuitable" indicates that 60 % to 100 % of the land system is unsuitable for the specified land utilization type. Unsuitable land systems may include up to 40 % of suitable land. In the land systems, at least one N factor and/or more than three $ factors are found.

Conditionally suitable land systems can be divided further into four sub-classes by conditionally suitable factors. They are inundation (i), drainage (w), soil nutrition (n) and slope (s).

Through the methods and criteria of land suitability classification, whole land of Indonesia[1] is defined into four suitability classes for paddy cultivation (wetland agriculture development), though there are some uncertain limiting factors in individual land system and areas without any available data.

Land areas by suitability classes and by province/region are shown on Table 3.2 and summarized below:

Land Suitability for Paddy Cultivation by Region

Unit: 1,000 ha

Region	Total	Fully suitable	Conditionally suitable	Marginally suitable	Unsuitable	Unclassified
Sumatera	47,531	2,195	5,355	12,976	25,856	1,148
Jawa	13,257	2,019	1,932	7,310	1,855	140
Bali & NT	8,657	392	309	1,652	6,275	29
Kalimantan	53,583	3,067	676	12,918	36,355	568
Sulawesi	18,615	1,200	920	1,602	14,723	170
Maluku & IJ	49,263	4,717	3,201	3,744	37,143	458
Indonesia	190,905	13,590	12,394	40,202	122,207	2,513

Source: JICA-FIDP Team calculation based on RePPProT Regional Reviews.
Note : Unclassified = Lakes, rivers, no data areas etc.

[1] Total areas of provinces are not same as authorized CBS data, which the FIDP team basically adopted. RePPProT data is used only for land potential assessment as all land suitability and avaiability analyses are based on the RePPProT land evaluation data. The total area of Indonesia is estimated at 1,909,049 km^2 by the RePPProT study while CBS reports 1,919,317 km^2, and the difference in area is some 10,000 km^2.

Some 13.6 million ha or 7 % of the national land is classified as fully suitable area to cultivate wetland paddy. When conditionally suitable area is taken into account, 26.0 million ha is suitable to be use as wet paddy field. The areas exceed the present wet paddy field area of about 8 million ha. It suggests field extension possibility for paddy cultivation in Indonesia.

Regionally, Maluku and Irian Jaya occupies the widest area of the fully suitable land at about 4.7 million ha, followed by Kalimantan at 3.1 million ha, Sumatera at 2.2 million ha, and Jawa at 2.0 million ha in order. Jawa shows the highest ratio of the fully suitable land to total land at about 15 %, and also fully and conditionally suitable land at nearly 30 %.

Most land of the conditionally suitable class is caused by soil nutrition and slope factors. Conditionally suitable lands with nutrient factor ($n) and with slope factor ($s) are about 5.3 million ha and 6.5 million ha, respectively. In other words, land of $n and $s holds 95 % of the total conditionally suitable area. Generally, $s requires reclamation of terraced paddy fields for field extension while $n requires high inputs of fertilizers and/or soil improvement materials for paddy cultivation.

3.1.2 Land Availability

(1) Methodology

Available land area for new wetland development is derived by subtracting current used land area from each land system area, based on matrix data of land system area and specified land use area provided by National Overview of the RePPProT. The land use types consist of twelve great categories, which are forest, bush/scrub, grassland, shifting cultivation, upland permanent cultivation, wetland cultivation, tree crops/estates, agroforestry, reforestation, water (river, lake, etc.), unvegetated and settlements. Lands which currently used as lowland paddy field (sawah) and other specified purposes are considered as no potential area for wetland extension development. Currently used areas and still available areas are distinguished as follows.

A. Current Used Land:
   1. Lowland paddy field (Sawah)
   2. Other purposes
      Forest except Conversion forest, Estate, Agroforestry, Reforestation, Water, Unvegetated land, Settlements, and No data area.

B. Available Land:

Conversion forest, Bush/scrub, Grassland, Shifting cultivation, and Upland.

In planning land conversion to paddy fields, environmental aspects should be considered carefully. Forest lands in Indonesia are classified by a method known as Consensus Forest Land Use Plan (Tata Guna Hutan Kesepakatan, TGHK). In the RePPProT study, TGHK boundaries were extensively revised in line with the existing identical index for forest classification. Each land system was classified into one TGHK category area, and the most reasonable category areas in forest were determined by using the relevant land system boundaries. Adjustments by the RePPProT were made taking account of actual land use and land status with respect to actual or firmly planned large-scale developments.

A land is classified into five TGHK categories by using of site index. Classification index of forest land consists of three identification items, which are land slope, soil erodibility and rainfall intensity. A rainfall intensity index comprises the mean annual rainfall (mm) divided by mean annual raindays.

TGHK category consists of following five, each having its own purpose and permitted form of exploitation.

TGHK Category, Purpose and Permitted Exploitation

Category	Purpose	Permitted exploitation	Forest area ('000 ha)
Nature reserve	Gene conservation	None	21,102
Protection forest	Watershed protection	None	45,005
Limited production forest	Timber production	Selective cutting	10,474
Normal production forest	Timber production	Selective or clear cutting	15,893
Conversion forest	Conversion to agriculture	Clear cutting	25,773

Note : Jawa and Bali are excluded from TGHK classification.
Source: RePPProT National Overview (1990).

In the FIDP study, only Conversion Forest is considered to be convertible to paddy field in future planning because Conversion Forest can be included within the area of a concessionaire. For Jawa and Bali, this TGHK classification is not applied because almost all forest area in these islands is considered to be developed for specific purposes. Therefore, all forest areas in Jawa and Bali are determined to be impossible to convert to paddy fields.

The area of Conversion Forest in outer Jawa and Bali is estimated at about 25.8 million ha or 22 % of the total forest area. Kalimantan occupies the most extensive Conversion Forest area of 11.4 million ha, and Sulawesi and Nusa Tenggara do not have so wide area of Conversion

Forest.

(2) Land Availability

Land is divided into two groups: one is already used land including present paddy field, and the other is available land for transformation into lowland paddy field. Therefore, paddy field reclamation shall be planned in only the latter land, although not all area in the land can be converted into paddy field.

The potential land is considered as gross area because the land includes unsuitable lands partly (at maximum 40 %) and planning loss areas. A planning losses are caused by scattering of small size areas and/or difficulty in identification of these smaller areas. To estimate the net potential development area, a reduction factor has to be applied to account for those unsuitable facets in the suitable land systems. The reduction factor, called as Identification Efficiency Index examined at Central Kalimantan in RePPProT study, is 36 % for paddy development. Therefore, 36 % of the gross suitable area is identified as extension potential of lowland paddy field. In the FIDP study, the same identification efficiency index is applied to whole Indonesia to estimate the ultimate wetland development areas.

The results of land availability study are shown on Table 3.3 and summarized as below:

Land Availability by Region

Unit:1,000 ha

Region	Gross total area	Present paddy field	Other used area	Gross available area	Net available area
Sumatera	47,531	2,089	24,924	20,518	7,386
Jawa	13,257	3,132	6,004	4,121	1,484
Bali & NT	8,657	445	3,596	4,616	1,662
Kalimantan	53,583	1,143	33,733	18,708	6,735
Sulawesi	18,615	831	12,182	5,601	2,016
Maluku & IJ	49,263	123	33,394	15,746	5,669
Indonesia	190,905	7,762	113,834	69,309	24,951

Notes: Other used area includes water-covered area and no data area.
Net available area is calculated by multiplying 36% by gross available area.
Source: JICA-FIDP Team calculation based on RePPProT Regional Reviews.

Gross land area available for paddy field extension is estimated at 69.31 million ha in Indonesia, and net available area counts to 24.95 million ha in Indonesia. Large portion of the available land is distributed in Sumatera, Kalimantan and Maluku and Irian Jaya region. On the other hand, Jawa (and Bali) region has already been developed well in agricultural land use, so that available area is not large.

3.1.3 Results of Land Suitability and Land Availability Study

Land potential of wetland agriculture development is derived from land suitability and availability study. In other words, a land which is suitable for paddy cultivation and convertible to paddy field is defined as a potential area of paddy field extension. The available lands with highly suitable conditions should be primarily considered as planning areas of field extension. Lands with lower suitability have only lower priority of development, and available but unsuitable lands are not recommended to be developed.

Net potential areas by suitability classes and by province/region are presented on Table 3.4 and summarized as below:

Land Potential for Wetland Agriculture Development by Region within Net Available Land

Unit:1,000 ha

Region	Total	Net potential area			Unsuitable
		Fully suitable	Conditionally suitable	Marginally suitable	
Sumatera	7,386	342	681	2,932	3,431
Jawa	1,484	27	55	1,086	316
Bali & NT	1,662	70	40	420	1,132
Kalimantan	6,735	529	166	2,740	3,300
Sulawesi	2,016	171	124	375	1,347
Maluku & IJ	5,669	1,293	725	565	3,085
Indonesia	24,951	2,432	1,791	8,117	12,611

Source: JICA-FIDP Team calculation based on RePPProT

Fully suitable potential area is 10 % of total available land, and conditionally suitable potential area is 7 % in Indonesia. Marginally suitable potential area, which is considered as costly land for reclamation and/or paddy cultivation, is 33 % of total. And unsuitable area occupies about half area of total available land.

Net potential area in fully suitable lands, which is given first priority of paddy field extension, is estimated at about 2.4 million ha in Indonesia. Regionally, Maluku and Irian Jaya occupies more than half of the area at 1.3 million ha. Kalimantan and Sumatera also have still big potential for field extension. On the contrary, Jawa and also Bali and Nusa Tenggara regions are not very extensive as far as land potential is concerned. The provinces which have more than 0.1 million ha of fully suitable land potential are Irian Jaya (1.2 million ha), Kalimantan Tengah (0.18 million ha), Riau (0.15 million ha), Kalimantan Selatan (0.14 million ha),

Maluku (0.13 million ha) and Kalimantan Barat (0.12 million ha). The provincial distribution of fully suitable potential land is illustrated in a map as shown on Figure 3.1.

A conditionally suitable land is considered to have potential of relatively low cost/input development, although development priority should be lower than that of a fully suitable land. Land development potential in fully and conditionally suitable areas in Indonesia is estimated at about 4.2 million ha in terms of net area. The three regions of Maluku and Irian Jaya, Sumatera and Kalimantan occupy about 89 % of the area or 3.8 million ha. The provinces in which more than 0.2 million ha of the fully and conditionally suitable lands extend are Irian Jaya (1.82 million ha), Riau (0.31 million ha), Sumatera Selatan (0.26 million ha) and Kalimantan Tengah (0.24 million ha).

In conclusion, Sumatera has relatively big potential for wetland agriculture development, and most potential area is located in eastern plains of the island, such as Sumatera Utara, Riau, Jambi and Sumatera Selatan. Land potentials for paddy field extension in Jawa and Bali and Nusa Tenggara are not so extensive, because suitable land in Jawa and Bali has widely been developed for intensive land uses. Kalimantan is the second extensive region of fully suitable potential land and it is distributed to all four provinces. Most suitable potential land in Sulawesi is concentrated in Sulawesi Selatan and Sulawesi Tengah, so rest two provinces have not so much potential. Maluku and Irian Jaya have physically the biggest potential of paddy field extension in Indonesia.

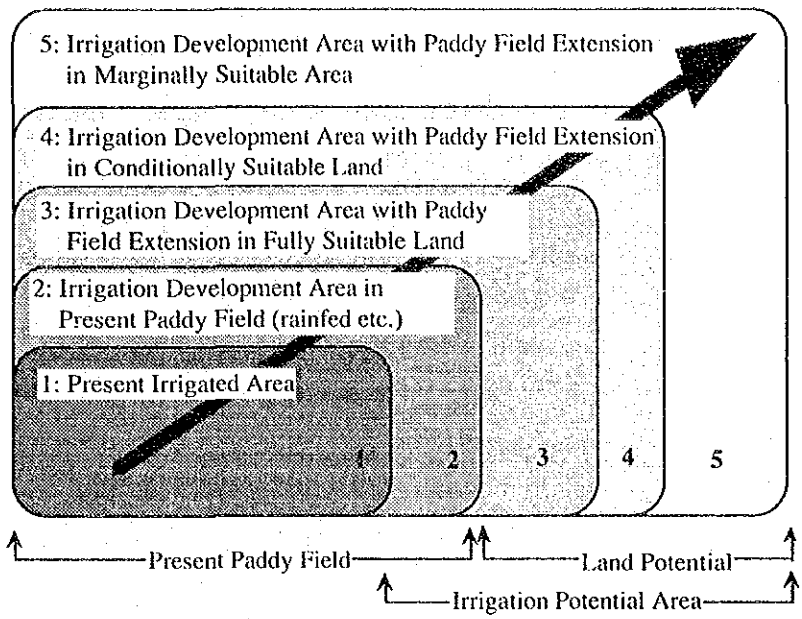
Assuming future land use pattern may not affect present reduction factor of Identification Efficiency Index (see page 3 -8), present land availability may not change until 2020.

3.1.4 Potential Area for Irrigation Development

So far estimated land availability shows further extents of irrigated paddy field area. While present paddy fields include some rainfed area where no irrigation water is available at present. In view of irrigation potential, those rainfed areas have also potentiality of irrigation development as well as further extendable area.

Then the irrigation potential area is equal to summation of potential area of paddy field extension and rainfed area. Following figure shows the relationship among land potential, rainfed area and present paddy field and development priority.

Schematic of Irrigation Development Process



Rainfed paddy field to be irrigated are estimated by total rainfed area from CBS and the ratio of paddy field with suitable condition (S + $) to the total paddy field. The results are shown in Table 3.5 and summarized in the following table.

Potential Area for Irrigation Development by Region

Unit:1,000 ha

Region	Irrigable rainfed field	Fully suitable	Conditionally suitable	Marginally suitable	Total potential
Sumatera	388	342	681	2,932	4,343
Jawa	602	27	55	1,086	1,770
Bali & NT	29	70	40	420	559
Kalimantan	258	529	166	2,740	3,693
Sulawesi	220	171	124	375	890
Maluku & IJ	0	1,293	725	565	2,583
Indonesia	1,496	2,432	1,791	8,117	13,836

Source: JICA-FIDP Team calculation.

Irrigation development potential is physically limited by not only land availability but also irrigation water availability. One of them determines a upper limit of irrigation development potential of a region. To estimate irrigation development potential, therefore, water resources assessment comes to another key factor.

3.2 Water Potential Study

Assessment of water potential in FIDP study aims to assess further irrigation development potential by using available data and parameter.

3.2.1 Methodology

Water potential for irrigation water of crops is estimated by subtracting the water demands for DMI[1] water, river maintenance water, fishpond water, livestock water and irrigation water of existing area from the available water resources.

Indonesia is divided into 90 SWS (Satuan Wilayah Sungai = river territory) units by regulation of the Minster of Public Works[2]. In this study, these territory are further sub-divided into 136 river basin as the unit area of water balance computations.

Water resources are calculated using the hydrological records of monthly river discharge and monthly rainfall records. Water demands is also calculated on monthly basis. A unit period for computation of water potential is therefore also monthly. And, effective reservoir such as dam reservoir is not considered in the water balance computations.

Maximum irrigated paddy field in the last four year (CBS's data from 1987 to 1990[3]) is used as paddy irrigated area for calculation. The estimated water potential area is considered to be expandable area from the existing irrigation area disregarding land limitation factor.

Water potential analysis is carried out by the monthly probable least rainfall occurring once in five years at each river basin and by using the constant of estimated cropping intensity for seven projection years. Projection years are 1990, 1995, 2000, 2005, 2010, 2015 and 2020.

The results of water potential study is overlaid with those of land potential study, and potential area for irrigation development is estimated.

The procedure of above estimation of irrigation potential area in terms of water resources is shown in Figure 3.2 schematically.

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[1] DMI : Domestic, Municipal and Industrial
[2] Regulation of Minister of Public Works. Decree No.39 (1989)
[3] Source : Agricultural survey. Land area by utilization in Jawa.and Agricultural survey. Land area by utilization for Outside Jawa. 1987, 1988, 1989 and 1990. ; Biro Pusat Statistik.

3.2.2 River Basin

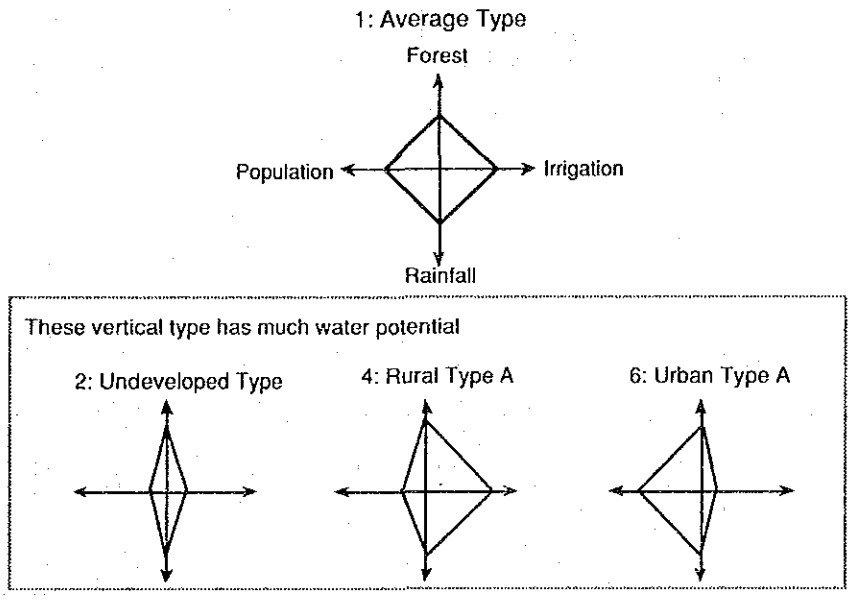
Indonesia is subdivided into 90 SWS (Satuan Wilayah Sungai). This river territory system is however rather administrative management boundary than hydrological watershed boundary system. For example, SWS No.213 (Kali Brantas) has clear dividing ridge which divide this SWS into two drainage area. For the purpose of water balance calculation and assessment of water availability, this SWS river territory system is divided future into 136 river basins. River territory was subdivided into river basins if it has

- island(s), those island(s) should be one river basin,
- some large scale river systems, SWS divided into those river systems,
- different watershed which estuary is also different ocean and
- large enough drainage area which can be divided into tow parts, i.e.. upper river basin and lower river basin.

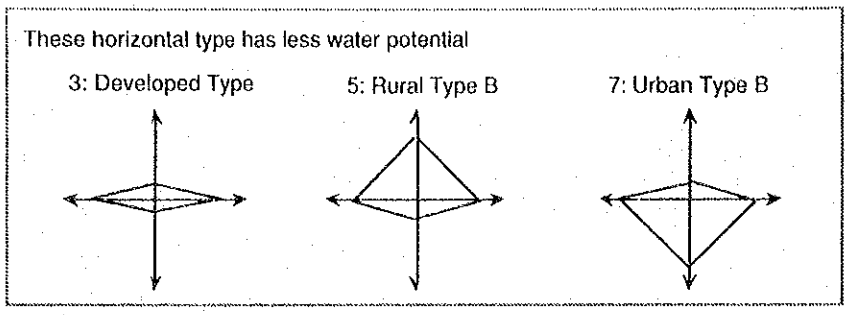
Table 3.6 shows the name of SWS and subdivided river basin's name. Figure 3.3 shows so divided 136 river basins.

(1) River Basin Characteristics

To grasp basin's characteristics in view of water resource development and watershed conservation, four major items, *namely forest area, rainfall, irrigation area and population* are selected and made radar chart for easy understanding.(see Figure 3.4)
Figure 3.4 shows the all radar chart for selected river basins[1]. Those radar chart can simply be grouped as following seven types



[1]16 river baisns out of 136 have not enogh data for evaluation.



(2) Basin Development

In view of irrigation development, all selected river basin were evaluated and categorized into following three development type for further development direction taking into account basin's characteristic (radar chart) and some other information (rainfall variation, total population, vegetation).

1.: Development Basin has much development potential. Basin development should be pay attention to basin environment and conservation.

2.: Conservation Basin can be developed if basin environment and conservation assessment result allow to develop.

3.: Management Basin should be developed under the control of overall water resource development management.

Development type of each river basin are so evaluated and shown in Figure 3.5. As can be seen in Figure 3.5, almost Jawa island is covered by Management Type basin and Sulawesi, Nusatengara and north-eastern part of Sumatera island are covered by Conversion Type. Then Development Type is extended whole Kalimantan island and almost Sumatera island. Maluku and Irian Jaya has not enough data for evaluation.

3.2.3 Water Resources

Rainfall

Available rainfall data have been collected in the planning of Integrated Water Resources Development (IWRD) Project[1]. The data were collected from 1,670 rainfall stations. Most data come from the study of Asian Compendium of Climatic Statistics[2].

[1] BTA-155
[2] The Asean Compendium of Climatic Statistics. ; Asean Secretariat (1982)

The average annual rainfall and the average monthly rainfall in each river basin are calculated using the above data. In each river basin, rainfall stations, of which data show similar rainfall pattern, having more than ten year record period, and properly distributed in the basin were selected.

The monthly rainfall 20% probability of non-exceedance is estimated using the following formula which is given by the Asean Compendium of Climatic Statistics:

$$P_{20} = 0.77 \times Pav - 51 \text{ (mm/month)}$$

where :

P_{20} = Rainfall at 20% probability of non-exceedance or 80 % dependability (mm/month)
Pav = Average rainfall (mm/month)

Runoff

The available river discharge data used are derived from IWRD Project data. These data are collected from some 300 observatories station. Out of 300 stations, 47 stations are selected applying following selection criteria to get the formula of relationship between rainfall and river runoff.

- the area having the river discharge data with more than 5 years observation period.
- no large irrigable area upstream from the area.
- the area with no large lake, and/or reservoir in the catchment area.
- the area having the rainfall data with long period in the catchment area.

Then the result is :

$$Qrb = 0.61 \times Pav + 8 \text{ (mm/month)}$$

where : Qrb = basin runoff (mm/month)
Pav = basin rainfall (mm/month)

Applying above equation and 80% dependable rainfall, 80% dependable basin runoff is estimated. The estimated river runoff by volume are calculated by multiplying the basin runoff (mm) by river basin area (km^2). The results of calculation are shown in Table 3.7, and summarized below: This 80% dependable basin runoff assumed to be the natural basin runoff (without any reduction of water demands) for further calculation of water balance.

Estimated Natural Basin Discharge

Region	MCM/Year	Percent
Sumatera	482,173	26%
Jawa	122,699	7%
Bali & Nusa tenggara	45,909	2%
Kalimantan	556,700	30%
Sulawesi	143,343	8%
Maluku & Irian Jaya	496,422	27%
Indonesia	1,847,246	100%

Source: JICA-FIDP team estimate

The total of basin discharge in Indonesia is 1,847 billion m^3 per year. Kalimantan, Irian Jaya and Sumatera show the high potential of discharge.

3.2.4 Water Demand

Water demands for 1) DMI, 2) river maintenance, 3) fish pond, 4) livestock and 5) irrigation are estimated based on the various available data and information. To make coincidence with estimated water resources for further water balance calculation, all demands are estimated in monthly bases in each river basin.

(1) Domestic, Municipal and Industrial (DMI) Water Demand

Total DMI water demand is estimated by multiplying projected population by per capita water consumption rate.

Per capita water consumption

Projection of per capita water consumption is assumed based on the National Water Resources Policy by FAO[1] and on a review of considering next water supply target by the Directorate of Water Supply (DAB), Directorate General of Human Settlements as follows :

Projection of Per Capita Water Consumption

Unit : lit/capita/day

City Size Category	1990-2000	2000-2015	2015-2020
Urban > 1,000,000	250	270	280
Urban < 1,000,000	150	170	180
Rural	30	38	40

Source: FAO and Cipta Karya

[1] Source : A Summary of Water Resources Availability and Demand Projections, Technical Report No.3, National Water Resources Policy, TA/INS/90/24. (July 1992) ; United Nations Development Programme, FAO

Population

Population is estimated based on the results of population projection in this study. Details are described in the Chapter 4.

Population projection in FIDP study is by Province. In this study, Population projection by Kabupaten is calculated by multiplying a coefficient with population projection by FIDP study. The coefficient is estimated based on the projection population of Kabupaten and Province by the IWRD study.

The results of DMI water demands by projection year are shown in the following table. DMI water demand is estimated at 14.4 billion m^3 in Indonesia in year of 2020. DMI water demand of Jawa is about 67% in total because of large population of Jawa.

DMI Water Demand Projection

Unit : MCM/year

Region	1990	1995	2000	2005	2010	2015	2020
Sumatera	926	1,089	1,465	1,665	1,959	2,316	2,630
Jawa & Bali	3,974	4,705	6,141	6,838	7,637	8,839	9,805
Kalimantan	209	249	346	402	500	675	768
Sulawesi	258	335	441	489	542	623	686
Maluku & NT	161	185	254	286	320	371	406
Irian Jaya	35	43	60	70	81	95	107
Indonesia	5,563	6,606	8,708	9,750	11,038	12,918	14,401

Source: JICA-FIDP team estimate.

(2) River Maintenance Water Demand

River maintenance water demand is estimated by multiplying projected urban population by per capita flushing water requirement.

According to the IWRD Study[1], the present per capita flushing water requirement of urban areas was estimated at 330 lit/day, for 2000 it is expected to rise to 360 lit/day and in 2015 it is expected to reduce to 300 lit/day since by then more people are expected to be connected to a sewerage system. Projection of per capita flushing water requirement is assumed with as follows:

Projection of per capita flushing water requirement is assumed with as follows :

[1] Source : Planning of Integrated Water Resources Development. Human Resources and Institutional development, Mid-Term Report 1. ; DGWRD, Ministry of Public Works & Directorate General of Development Cooperation, Ministry of Foreign Affairs, Netherland, 1991

Projection of Per Capita Flushing Water Requirement

Projection	Water Requirement
1990 - 2000	330 lit/capita/day
2000 - 2015	360 lit/capita/day
2015 - 2020	300 lit/capita/day

Source: see footnote 1

The results of river maintenance water demands by projection year are shown in the following table. Water demand is estimated at 14.7 billion m^3 in Indonesia in year of 2020 as same as DMI water demand. Water demand of Jawa is about 65% in total.

River Maintenance Flow

Unit : MCM/year

Region	1990	1995	2000	2005	2010	2015	2020
Sumatera	1,119	1,371	1,767	2,071	2,416	2,359	2,733
Jawa & Bali	4,706	5,662	7,203	8,122	9,151	8,653	9,779
Kalimantan	302	373	484	583	697	696	820
Sulawesi	333	399	506	586	680	665	769
Maluku & NT	164	204	266	318	379	379	444
Irian Jaya	48	59	77	92	108	106	124
Indonesia	6,672	8,068	10,303	11,771	13,431	12,857	14,670

Source: JICA-FIDP team estimate

(3) Fishpond Water Demand

Fishpond water demand is estimated by multiplying projected fishpond area by water consumption rate. The water consumption rate is assumed to be 7 mm/day/ha[1]. The fishpond area in each river basin are estimated based on the CBS's data[2] and the fishpond area is assumed to be constant after 1990.

Fishpond Water Demand

Unit: MCM/year

Region	Water Demand
Sumatera	1,257
Jawa	805
Bali & Nusa tenggara	44
Kalimantan	753
Sulawesi	354
Maluku & Irian Jaya	0
Indonesia	3,213

Source: JICA-FIDP team estimate

[1] Source : Integrated River Basin Water Resources Development Planning, Vol.6 Aquaculture. ; DGWRD, Ministry of Public Works & Directorate General of Development Cooperation, Ministry of Foreign Affairs, Netherland, 1990

[2] Source : Agricultural survey. Land area by utilization in Jawa.and Agricultural survey. Land area by utilization for Outside Jawa. 1987, 1988, 1989 and 1990. ; Biro Pusat Statistik.

(4) Livestock Water Demand

Livestock water demand is estimated by multiplying heads of livestock by water consumption rate. A water consumption rate of livestock unit per day is assumed as follows :

Unit Water Requirement for Livestock

Unit : liters/day

Livestock	Water Consumption
Cattle/Buffalo	40
Sheep/Goat	5
Pig	6
Poultry	0.6

Source: Agricultural Compendium (1981), Ilacob.V, Netherlands.

Livestock population projection is estimated based on the tendency of livestock population data from 1984 to 1989[1]. The following table show the livestock water demand that it is small proportion comparing with other water demand.

Livestock Water Demand

Unit : MCM/year

Region	1990	1995	2000	2005	2010	2015	2020
Sumatera	70.4	84.7	98.6	113.0	127.2	140.8	154.8
Jawa	139.1	155.2	172.1	188.4	204.6	220.9	237.0
Bali&NT	45.0	51.4	57.7	64.2	70.4	76.9	83.4
Kalimantan	13.2	15.9	18.3	21.2	23.9	26.5	29.0
Sulawesi	56.9	65.6	75.0	83.6	92.3	101.1	110.0
Maluku &IJ	4.6	5.2	5.8	6.4	7.1	7.7	8.3
Indonesia	329.2	378.0	427.5	476.8	525.5	573.9	622.5

Source: JICA-FIDP team estimate

(5) Irrigation Water Demand

Irrigation water demand is estimated by multiplying irrigation area by irrigation diversion requirement. The parameter assumption for using the estimation of irrigation water are summarized in Table 3.8.

Cropping Pattern

The typical cropping pattern is estimated in each province based on the past change in seasonal paddy cropping area, rainfall pattern and following assumptions.

[1] Source : Statistik Indonesia, 5.4 Livestock. (1984 to1989) ; Biro Pusat Statistik.

- dry season cultivation and wet season cultivation are defined based on average monthly planted area and average rainfall pattern in the province.
- the upper limit of cropping intensity is to be 2.0.
- During wet season, 100% of paddy is to be planted, while during dry season, paddy and palawija are to be planted.
- crop growing period for wet and dry paddy and palawija is 90 days
- crop growing period for palawija is 90 days

Figure 3.6 shows the schematic typical cropping pattern.

Evapotranspiration

Monthly crop evapotranspiration is obtained from the results of Regional Physical Planning Project for Transmigration (RePPProT) study under Ministry of Transmigration[1].

Reference Crop Evapotranspiration by Island by Penman Method

Island	Mean Monthly ETo (mm/month)	Mean Daily ETo (mm/day)	Max Monthly ETo (mm/month)	Min Monthly ETo (mm/month)
Sumatera	113	3.8	143	81
Jawa & Bali	128	4.3	209	70
Kalimantan	122	4.1	157	85
Sulawesi	132	4.4	180	90
Maluku & NT	138	4.6	204	81
Irian Jaya	123	4.1	162	78
Indonesia	127	4.2		

Source: RePPProT (1989)

Irrigation Efficiency

Irrigation diversion requirements are calculated by considering operation loss and conveyance loss. Irrigation efficiency[2] are adopted to be 55% for paddy field and to be 50% for palawija field.

The following table shows the irrigation water demand by Region. Water demand of Jawa is more than 50 % in total

[1] Source : Regional Physical Planning Project for Transmigration (1985), Review of Phase 1 Results, Volume Two Annexes 3. ; Ministry of Transmigration.
[2] Source : Irrigation Design Manual, Supporting Volume for Irrigation Design Standards. December 1986 ; DGWRD, Ministry of Public Works.

Estimated Irrigation Water Demand

Unit: MCM/year

Region	Irrigation Water	
Sumatera	15,992	17.0 %
Jawa	52,541	55.7 %
Bali & Nusa tenggara	7,770	8.2 %
Kalimantan	3,643	3.9 %
Sulawesi	14,243	15.1 %
Maluku & Irian Jaya	182	0.2 %
Indonesia	94,370	100 %

Source: JICA-FIDP team calculation.

(6) Water demands

Total annual water demand in every river basin in year of 2020 is shown in Table 3.9 and summarized below. Out of 1,847 billion m3 of available water (see page 14), about 127 billion m3 of water will be used for DMI, Irrigation, Livestock etc. Balanced water of about 1,720 billion m3 is available for another new irrigation but not all of them, since wet season surplus water can not be used for dry season irrigation without any large scale water reservoirs. Water availability for irrigation is discussed in next Chapter.

Annual Water Demand in 2020

Unit:MCM

Region	DMI	River Maintenance	Irrigation	Fishpond	Livestock	Total
Sumatera	2,630	2,733	15,992	1,257	155	22,766
Jawa & Bali	9,805	9,779	54,918	809	258	75,569
Kalimantan	768	820	3,643	753	29	6,014
Sulawesi	686	769	14,243	354	110	16,162
Maluku & NT	406	444	5,526	40	69	6,485
Irian Jaya	107	124	48	0	2	281
Indonesia	14,401	14,670	94,370	3,213	623	127,277

Source: JICA-FIDP team calculation.

3.2.5 Water Potential

Water potential for irrigation in each river basin is estimated by subtracting the all water demands from the available water resources and converted into irrigable area. This balance calculation is made assuming that ;

- no reservoir or pond for water storage
- no return flow
- no basin transfer water
- priority order for water demand is DMI first and followed by river maintenance, fish/livestock and irrigation

Table 3.10 shows the calculation results by river basin and summarized below.