

1.2 Future Socio-Economic Structure

1.2.1 Population Projection

1) Population Projection per River Basin

A population projection for the years of 2000, 2005 and 2015 with separated figures for urban and rural areas, was provided by IPARDES as a preliminary population projection per River Basin (shown in Table - 1.34). According to this projection, population of Paraná State in 2005 will reach 8,350,200 of urban inhabitants, and 1,558,700 of rural inhabitants performing a total of 9,908,900 inhabitants. For the year of 2015, urban population, rural population and total population were estimated at 9,969,300, 1,161,100 and 11,130,400 people, respectively.

The projection means that:

- Urban population will increase in approximately 3,500,000 inhabitants from now to 2015. In other words, there will be an increase of urban area larger than approximately two times the area equivalent to the present urban area of Curitiba.
- Approximately one million inhabitants will migrate from rural areas to urban areas from now until the year of 2015.

In terms of projected population per river basin, Iguaçu river basin, Tibagi river basin and Ivaí river basin will occupy approximately 40%, 15% and 12% of the total population in 2015, respectively, as shown in Table - 1.34.

2) Population Projection per MRH

In addition to the results of the census of 1970, 1980 and 1991 (shown in Table - 1.8), projected population per MRH for 1993, 1995 and 2000 was provided by IPARDES as preliminary projection. The population projection for the target years 2005 and 2015 per MRH was made by JICA Team based on the results of the census of 1970, 1980 and 1991 and on IPARDES' projection for the years of 1995 and 2000.

Estimated population (urban, rural and total) per MRH in the years of 1993, 2005 and 2015 is shown in Table - 1.35. The results of graphic works for population projection per MRH (urban, rural and total) and the average annual growth rate per MRH (urban, rural and total) for the periods of 1970-1980, 1980-1991, 1991-2005 and 2005-2015 are shown in Figure - 1.3, Figure - 1.4, Figure - 1.5 and Figure - 1.6, and Table - 1.36, respectively.

According to the estimated population by JICA Team, the urban population in MRH 268/Curitiba will reach approximately 3,113,000 inhabitants and will share about 31% of the total urban population of the State in 2015. This means that Curitiba region will have an increase of more than one million inhabitants in urban area from 1993 to 2015.

In terms of urban population of the other four large MRH (MRH 273/Campos de Ponta Grossa, MRH 281/N.N. Londrina, MRH 282/N.N. Maringá and MRH 288/Extr. Oeste Paranaense (Cascavel, Foz do Iguaçu, etc.)) will increase not only in figures but also in share. The urban population of these four large MRH is estimated in approximately 3,608,000 inhabitants, sharing 36% of the urban population of Paraná State in 2015.

Table - 1.34 Projected Population in Paraná State per River Basins in the years 2000, 2005 and 2015

No.	Name of Basin	2000			2005			2015							
		Urban Population	Rural Population	Total Population	Urban Population	Rural Population	Total Population	Urban Population	Rural Population	Total Population					
1	Cinzas	197,966	83,541	281,507	218,417	2,622	69,003	4,433	287,420	2,929	259,287	4,233	308,380	2,777	
2	Iguaçu	3,043,306	654,514	3,697,820	3,367,428	40,333	3,407,761	38,588	3,968,779	40,055	4,009,226	40,222	4,751,112	40,992	4,484,338
3	Ipirat	100,705	31,211	131,916	120,433	1,441	121,874	26,064	146,497	1,448	154,165	1,555	172,929	1,555	
4	Ivaí	869,286	315,640	1,184,926	948,009	11,335	959,344	16,533	1,205,647	12,171	1,217,818	11,116	1,811,034	15,539	1,293,133
5	Litorânea	167,275	42,123	209,398	182,859	2,224	185,083	41,064	223,973	2,226	215,038	2,116	34,097	2,94	249,135
6	Paraná 1	7,202	7,092	14,294	7,666	0,09	7,756	5,674	13,340	0,13	13,470	0,09	3,894	0,34	12,657
7	Paraná 2	18,728	21,675	40,403	19,858	0,43	20,292	16,402	36,260	0,37	36,626	0,23	10,500	0,9	33,166
8	Paraná 3	615,212	81,405	696,617	720,267	8,653	728,920	63,457	792,377	7,911	800,288	9,088	42,204	3,63	947,075
9	Parapanema 1	77,878	12,717	90,595	82,141	0,98	83,129	10,330	92,471	0,93	93,402	0,93	7,214	0,62	100,185
10	Parapanema 2	17,841	4,485	22,326	19,108	0,24	19,300	3,777	22,885	0,23	23,112	0,22	2,744	0,24	24,735
11	Parapanema 3	157,497	23,438	180,935	168,129	2,011	170,140	1,121	185,555	1,871	187,426	1,973	192,820	1,973	203,713
12	Parapanema 4	64,165	17,315	81,480	67,388	0,81	68,199	12,712	80,910	0,81	81,722	0,76	7,886	0,67	83,715
13	Piquin	478,263	215,634	693,897	517,018	6,191	523,209	8,821	692,704	6,999	700,973	6,033	123,106	10,6	724,079
14	Pinóp	439,909	34,784	474,693	303,395	5,099	308,494	26,586	335,081	5,235	340,316	5,231	17,246	1,49	636,498
15	Ribeira	71,731	82,412	154,143	90,117	1,08	91,197	76,687	166,804	1,68	168,486	1,211	61,266	5,28	181,425
16	Tibagi	1,198,609	178,155	1,376,764	1,317,932	15,78	1,333,714	134,838	1,472,770	14,386	1,487,156	11,644	116,144	10,00	1,675,283
	TOTAL	7,523,573	1,803,941	9,327,514	8,350,200	100,000	8,450,200	1,538,693	9,988,893	100,000	10,527,514	1,611,117	11,138,631	1,611,117	12,749,748

Source: Projeção da População do Paraná Segundo as Bacias Hidrográficas do Estado para os anos de 2005 e 2015 (Projection of the Population of Paraná According to the River Basins of the State for the years 2005 and 2015)-IPARDES

Table - 1.35 Projected Population in Paraná State per MRH - 1993, 2005 and 2015

No of the MRH/Name of Region	1993			2005			2015							
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total					
01. MRH 268/CURITIBA	1,949,719	30,333	1,980,052	2,382,200	30,992	2,413,192	7,299	96,700	104,000					
02. MRH 269/L. PARANAENSE	145,826	2,227	148,053	180,500	2,116	182,616	2,100	30,100	32,200					
03. MRH 270/ALTO RIBEIRA	5,478	0,09	5,568	9,100	0,09	9,190	1,39	8,800	10,190					
04. MRH 271/A. RIO NEGRO	6,350	0,10	6,450	73,600	0,11	73,710	2,32	45,300	47,620					
05. MRH 272/C. LAPA	60,616	0,94	61,560	73,600	0,88	74,480	2,98	84,800	87,780					
06. MRH 273/C.PONTA GROSSA	349,228	5,43	354,661	441,200	5,28	446,480	3,55	496,600	5,01					
07. MRH 274/C.JAGUARIVA	43,660	0,68	44,340	69,300	0,83	70,130	1,00	84,900	85,900					
08. MRH 275/S. MAT. DO SUL	20,122	0,31	20,432	26,300	0,31	26,610	2,25	31,500	33,750					
09. MRH 276/Col. IRATI	71,821	1,12	72,941	90,400	1,08	91,480	103,300	6,63	109,930					
10. MRH 277/ALTO IVAI	23,934	0,37	24,304	32,600	0,39	32,990	59,500	3,82	62,310					
11. MRH 278/N. V. WENCESLAU BRAZ	96,440	1,50	97,940	123,500	1,48	124,980	45,000	2,89	127,880					
12. MRH 279/N. V. JACAREZINHO	220,756	3,43	224,189	262,100	3,14	265,240	3,27	313,000	3,16					
13. MRH 280/AIG. ASSAI	49,386	0,77	50,162	60,200	0,72	60,920	1,02	76,100	77,120					
14. MRH 281/N. LONDRINA	738,500	11,49	750,000	935,700	11,21	946,910	3,12	984,300	9,93					
15. MRH 282/N. N. MARINGÁ	404,731	6,30	411,031	548,382	5,14	553,524	1,08	565,300	5,70					
16. MRH 283/N. N. PARANAVAI	205,603	3,20	208,803	240,200	2,88	243,080	2,25	275,200	2,78					
17. MRH 284/N. N. APUCARANA	214,052	3,33	217,385	257,900	3,09	260,990	3,46	311,800	3,15					
18. MRH 285/N. N. UMUARAMA	260,680	4,06	264,740	312,000	3,74	315,740	4,65	380,500	3,84					
19. MRH 286/C. MOURAO	241,901	3,76	245,661	310,400	3,72	314,120	4,62	382,400	3,70					
20. MRH 287/TANGA	33,770	0,53	34,300	50,600	0,61	51,200	5,09	130,000	1,31					
21. MRH 288/Ext. Oeste PARANAENSE	765,866	11,91	777,777	1,030,537	12,02	1,042,559	16,800	1,229,800	13,25					
22. MRH 289/Sudeste PARANAENSE	235,122	3,66	238,788	305,400	3,66	309,060	162,100	467,500	4,72					
23. MRH 290/C. GUARAPUAVA	179,566	2,79	182,361	230,700	2,78	233,480	19,500	390,200	3,94					
24. MRH 291/MEDIO IGUAÇU	105,048	1,63	106,678	131,700	1,58	133,280	70,900	202,600	2,04					
TOTAL OF PARANA STATE	6,428,235	109,000	6,537,235	8,350,200	100,000	8,450,200	1,538,693	9,988,893	100,000	10,527,514	1,611,117	11,138,631	1,611,117	12,749,748

Source: Population of 1993 is Preliminary Projection by IPARDES

Remark: Population of 2005 and 2015 was projected by JICA Team

Table - 1.36 Average Annual Growth Rate of Population by MRH during the period 1970-1980, 1980-1991, 1991-2005 and 2005-2015

No of the MRH/Name of Region	1970-1980			1980-1991			1991-2005			2005-2015		
	Urban	Rural	Total									
01. MRH 268/CURITIBA	7.28	(-3.50)	5.78	3.22	0.63	3.03	2.30	(-0.59)	2.15	1.89	(-1.61)	1.76
02. MRH 269/L. PARANAENSE	3.01	(-0.66)	2.01	2.77	0.33	2.25	1.75	(-0.16)	1.42	1.53	(-0.83)	1.20
03. MRH 270/ALTO RIBEIRA	2.80	0.15	0.39	4.32	(-1.04)	(-0.32)	2.47	(-0.99)	(-0.27)	1.89	(-1.59)	(-0.60)
04. MRH 271/A. RIO NEGRO	2.78	0.47	0.69	5.44	1.28	1.81	3.07	0.77	1.18	2.10	(-0.03)	0.43
05. MRH 272/C. LAPA	2.66	(-0.13)	1.19	2.52	0.51	1.59	1.59	0.16	1.00	1.43	(-0.51)	0.72
06. MRH 273/C.PONTA GROSSA	4.60	0.15	3.32	2.79	(-1.48)	1.92	1.92	(-1.34)	1.46	1.65	(-2.10)	1.29
07. MRH 274/C.JAGUARIAIVA	4.59	(-0.29)	1.28	7.57	(-2.40)	2.57	4.21	(-2.38)	2.42	2.35	(-3.70)	1.46
08. MRH 275/S. MAT. do SUL	6.21	(-0.84)	0.81	3.21	0.32	1.62	2.21	0.25	1.02	1.82	(-0.56)	0.53
09. MRH 276/Col. IRATI	3.16	0.03	0.97	3.01	0.36	1.33	1.92	0.06	0.87	1.60	(-0.60)	0.48
10. MRH 277/ALTO IVAI	6.73	1.54	2.08	3.95	(-2.34)	(-1.25)	2.61	(-1.69)	(-0.46)	1.99	(-2.41)	(-0.65)
11. MRH 278/N. V. WENCESLAU BRAZ	3.66	(-2.53)	(-0.79)	3.22	(-4.01)	(-0.82)	2.04	(-3.71)	(-0.04)	1.68	(-4.33)	0.37
12. MRH 279/N. V. JACAREZINHO	2.32	(-6.27)	(-2.48)	2.23	(-3.35)	0.15	1.39	(-4.10)	0.13	1.30	(-4.96)	0.49
13. MRH 280/Alq. ASSAI	2.45	(-5.95)	(-3.24)	2.65	(-4.00)	(-0.59)	1.64	(-4.54)	(-0.21)	1.45	(-5.32)	0.34
14. MRH 281/N. N. LONDRINA	4.71	(-6.60)	0.30	2.78	(-4.81)	1.34	1.96	(-5.25)	1.34	1.66	(-6.06)	1.39
15. MRH 282/N. N. MARINGA	5.10	(-8.89)	(-0.18)	4.06	(-4.78)	2.72	2.60	(-5.84)	2.11	1.93	(-6.70)	1.75
16. MRH 283/N. Novis. PARANA VAI	3.11	(-5.61)	(-1.56)	1.73	(-4.64)	(-0.45)	1.21	(-4.91)	0.04	1.23	(-5.68)	0.56
17. MRH 284/N. N. APUCARANA	4.39	(-4.96)	(-1.90)	1.96	(-5.35)	(-1.42)	1.46	(-5.29)	(-0.31)	1.43	(-5.95)	0.46
18. MRH 285/N. Novis. UMUARAMA	3.89	(-5.85)	(-2.88)	1.96	(-5.39)	(-1.58)	1.41	(-5.51)	(-0.49)	1.38	(-6.26)	0.34
19. MRH 286/C. MOURAO	5.34	(-5.92)	(-2.72)	2.96	(-4.38)	(-0.63)	2.05	(-4.79)	0.11	1.73	(-5.57)	0.68
20. MRH 287/PITANGA	7.27	1.92	2.43	6.05	(-2.01)	(-0.62)	3.56	(-1.26)	0.23	2.28	(-1.85)	(-0.05)
21. MRH 288/Ext. Oeste PARANAENSE	12.48	(-2.33)	2.47	3.78	(-4.47)	0.51	2.78	(-4.08)	1.37	2.14	(-4.61)	1.45
22. MRH 289/Sudoeste PARANAENSE	7.61	(-0.33)	1.56	2.78	(-3.03)	(-0.78)	2.18	(-3.12)	(-0.16)	1.83	(-5.35)	(-0.17)
23. MRH 290/C. GUARAPUAVA	9.82	1.55	4.57	2.18	(-0.02)	1.07	1.95	0.09	1.12	1.81	(-0.47)	0.93
24. MRH291/ MEDIO IGUAÇU	5.10	(-0.00)	2.17	2.53	(-0.43)	1.14	1.81	(-0.51)	0.90	1.63	(-1.16)	0.73
TOTAL OF PARANA STATE	5.97	(-3.32)	0.97	3.01	(-3.03)	0.93	2.15	(-2.59)	1.15	1.79	(-2.90)	1.17

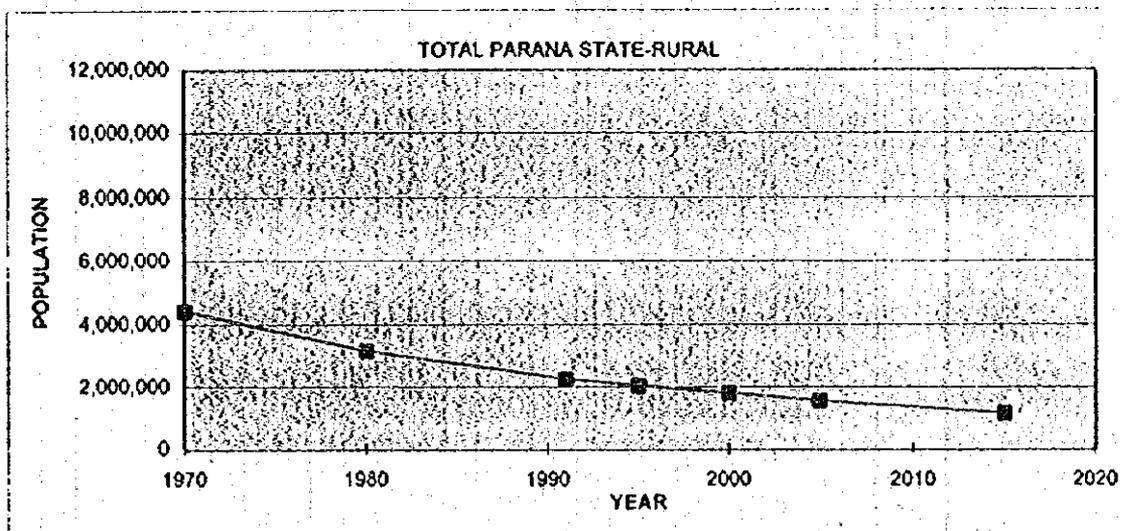
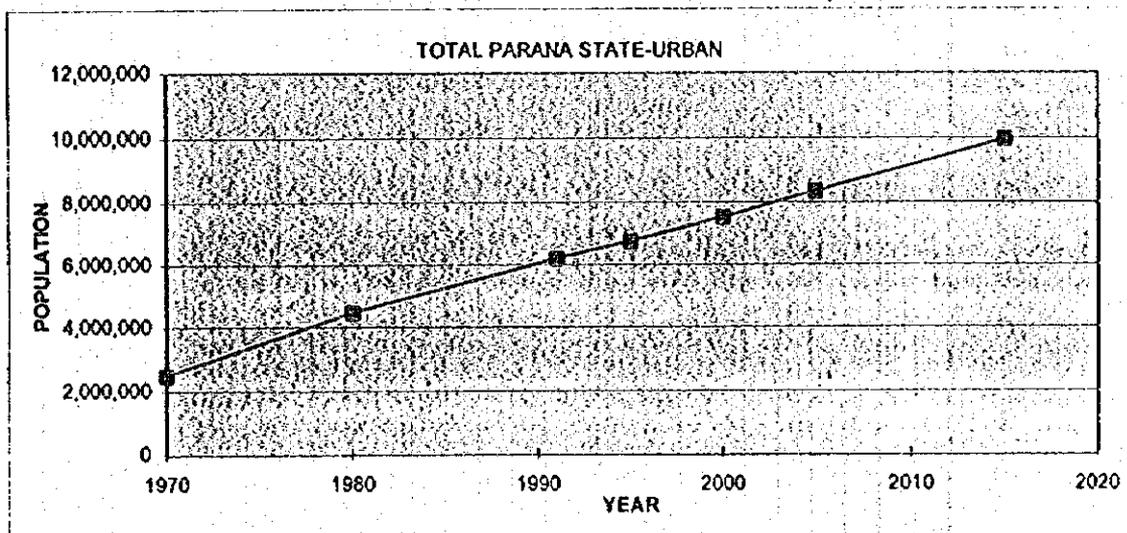
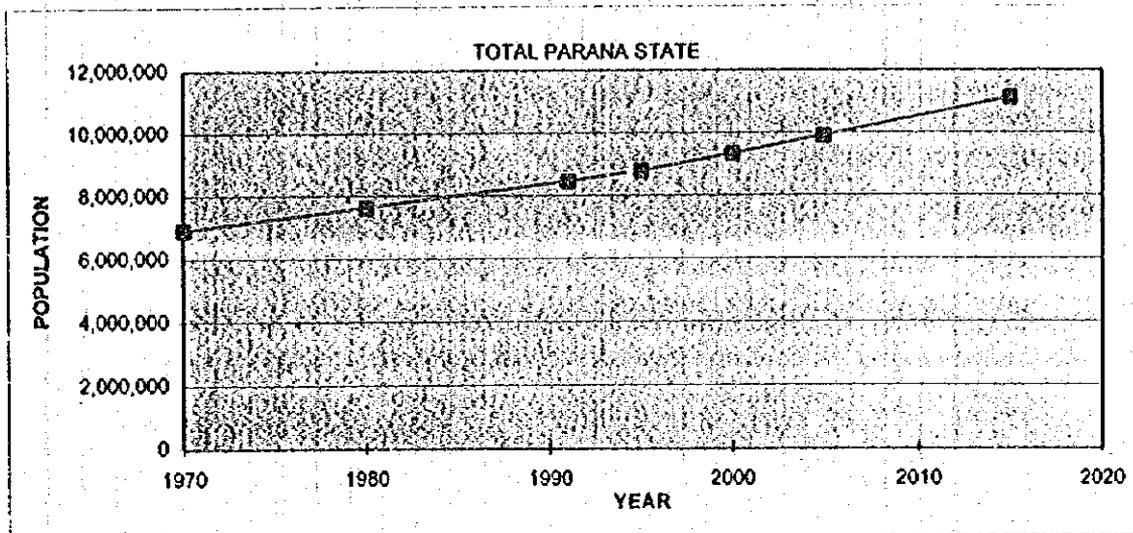


Figure - 1.3 Projected Urban, Rural and Total Population in Parana State

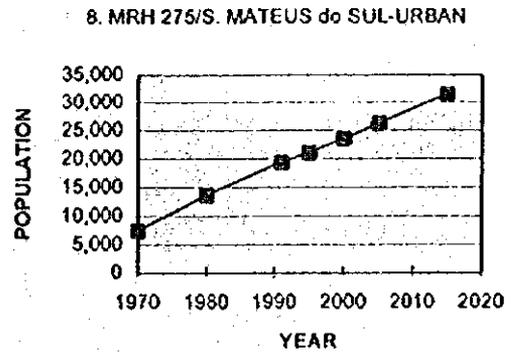
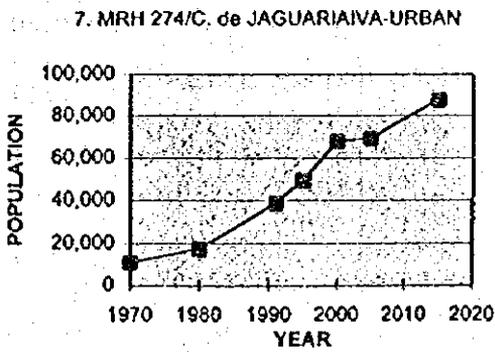
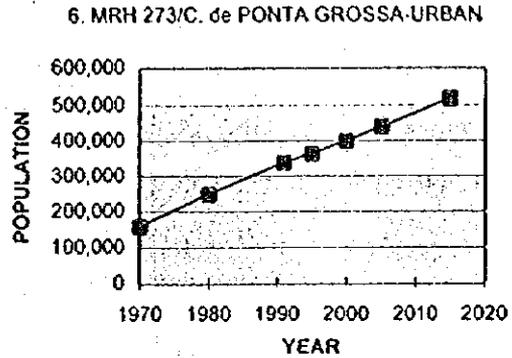
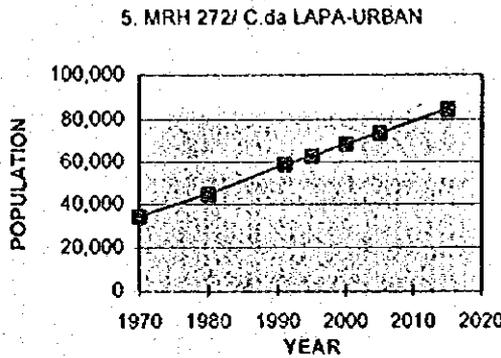
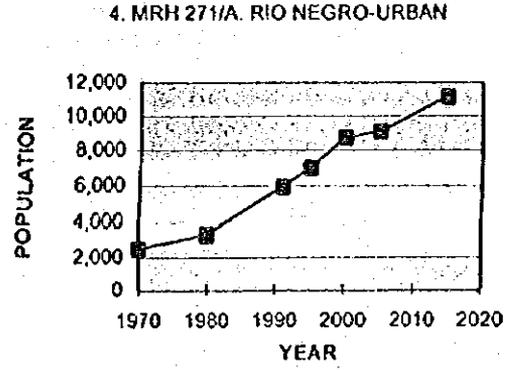
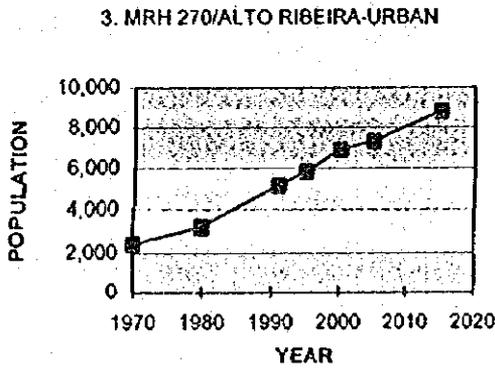
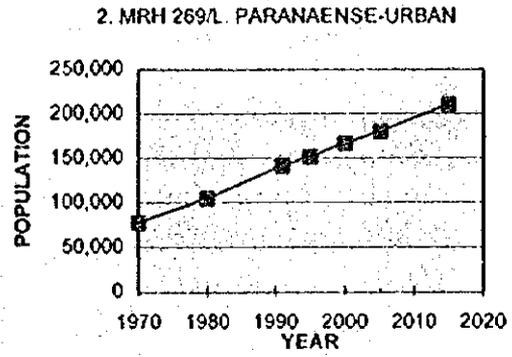
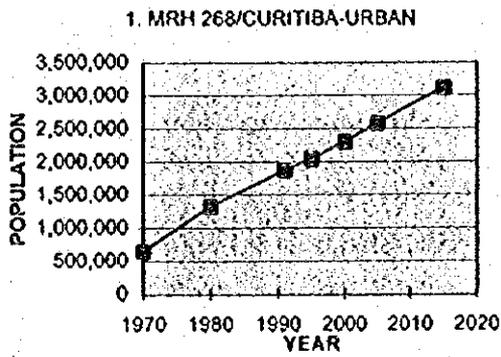
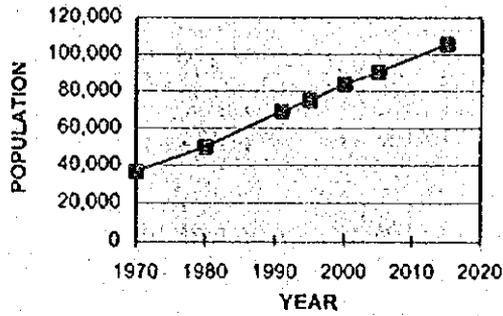
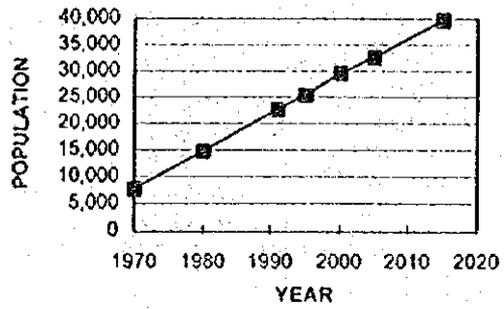


Figure - 1.4 (I) Projected Urban Population per MRH (MRH 268 - MRH 275)

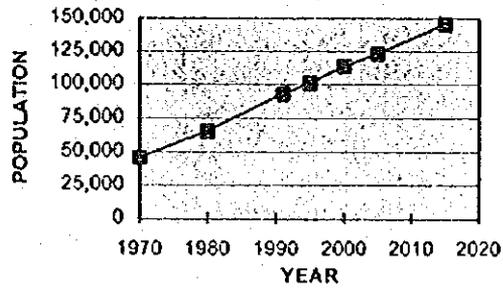
9. MRH 276/Col. de IRATI-URBAN



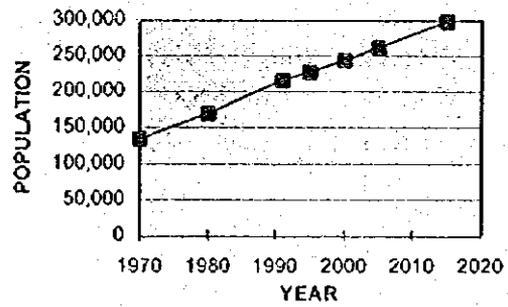
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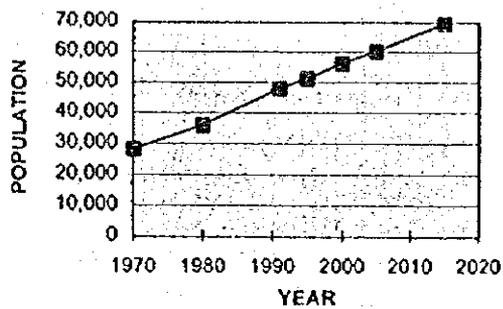
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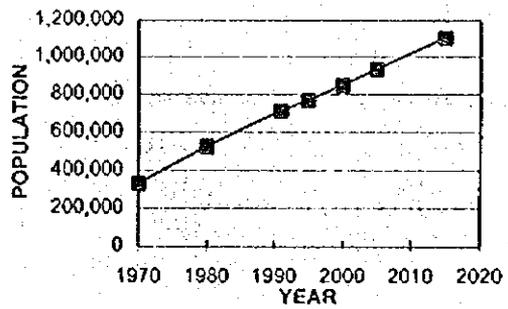
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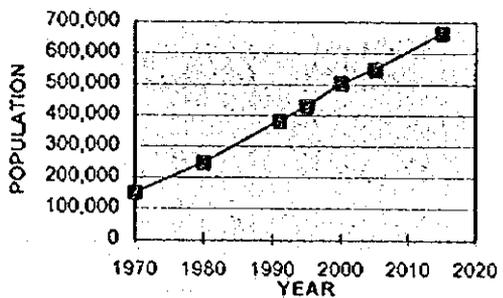
13. MRH 280/ALG. de ASSAI-URBAN



14. MRH 281/N. N. LONDRINA-URBAN



15. MRH 282/N. N. MARINGA-URBAN



16. MRH 283/N. Noviss. PARANAVAI-URBAN

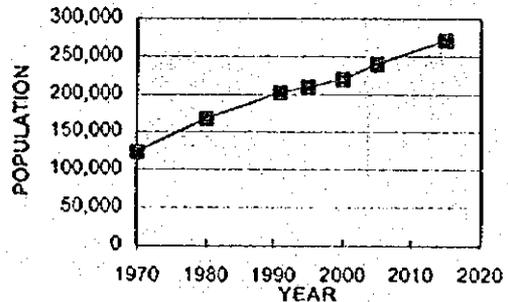
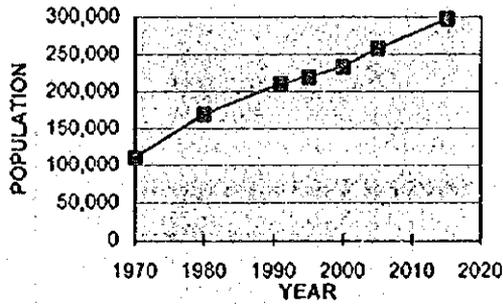
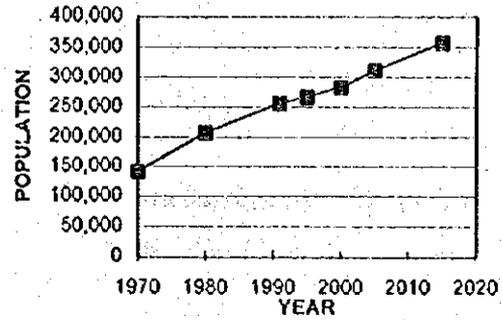


Figure - 1.4 (2) Projected Urban Population per MRH (MRH 276 - MRH 283)

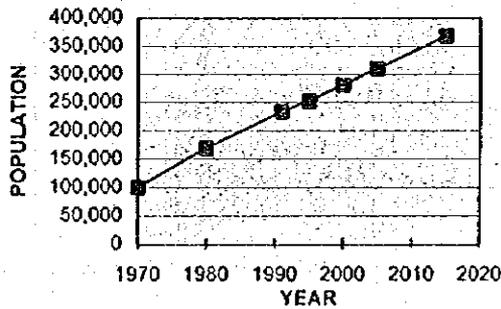
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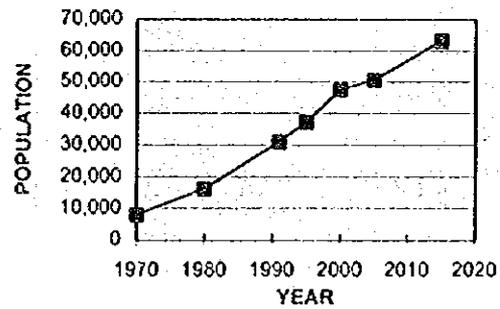
18. MRH 285/N. Noviss. UMUARAMA-URBAN



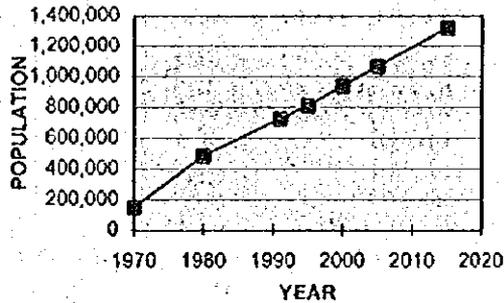
19. MRH 286/C. MOURAO-URBAN



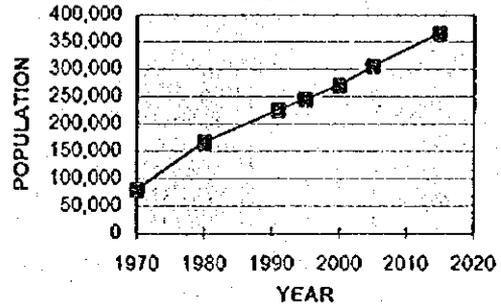
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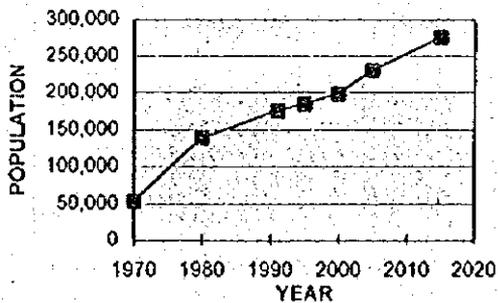
21. MRH 288/Ext. OESTE PARANAENSE-URBAN



22. MRH 289/SUDOESTE PARANAENSE-URBAN



23. MRH 290/ C. de GUARAPUAVA-URBAN



24. MRH291/ MEDIO IGUACU-URBAN

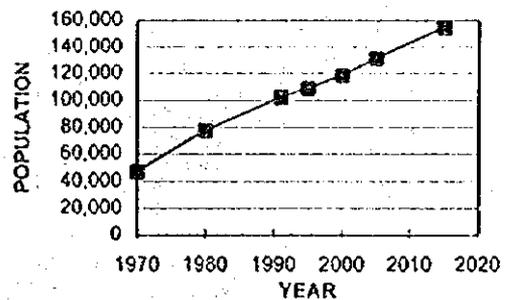


Figure - 1.4 (3) Projected Urban Population per MRH (MRH 284 - MRH 291)

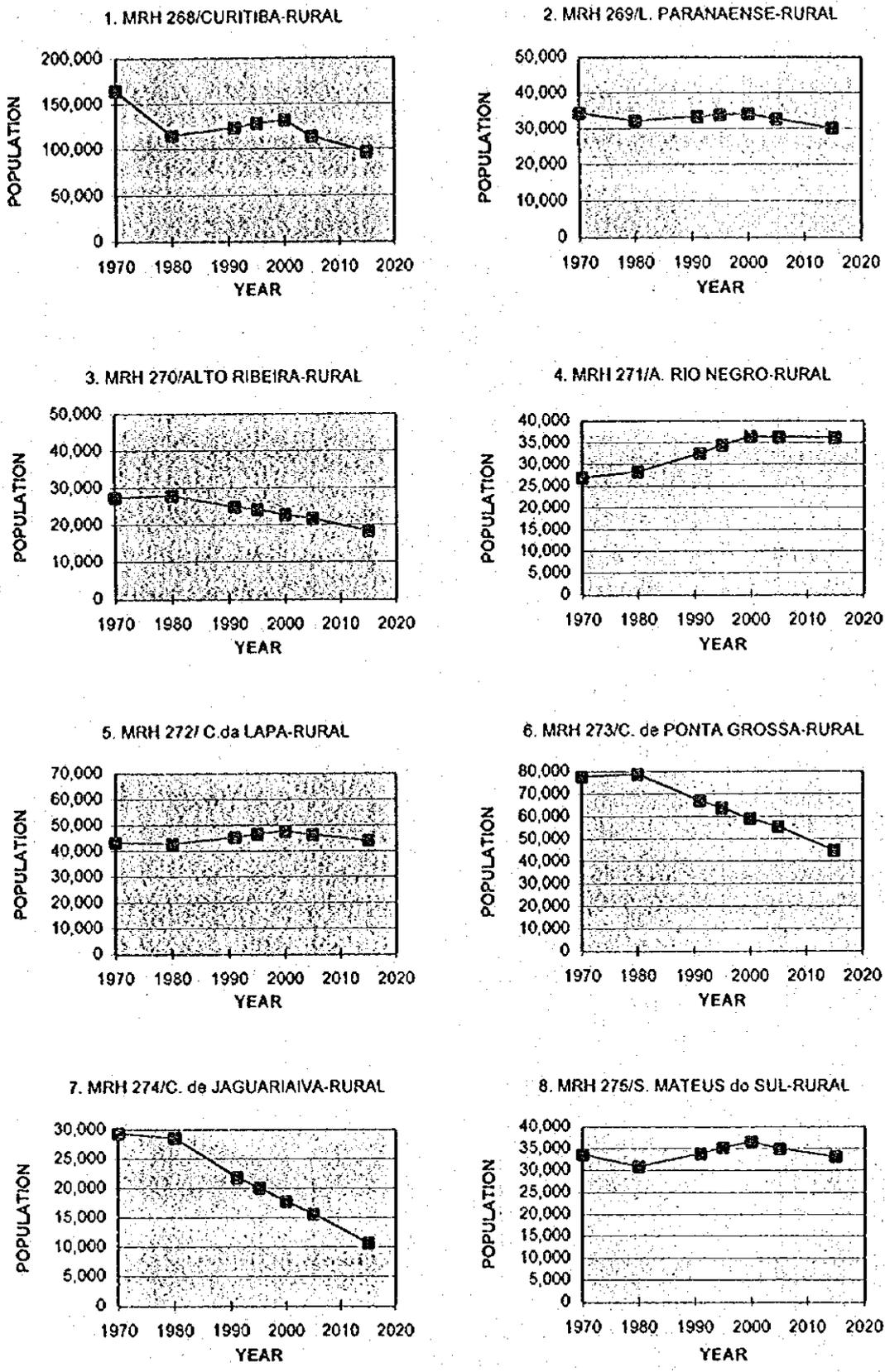
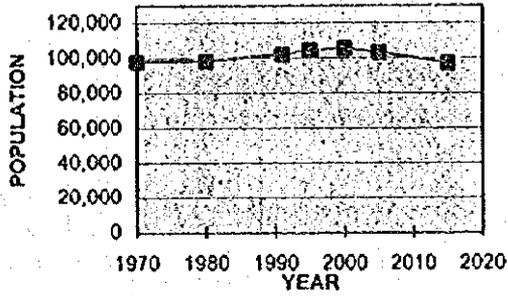
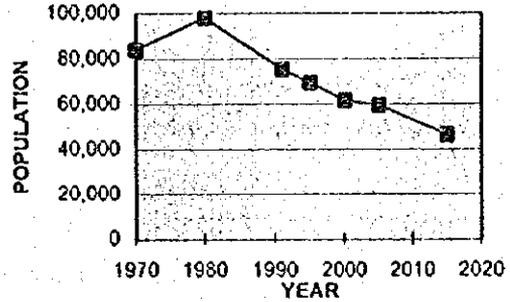


Figure - 1.5 (1) Projected Rural Population per MRH (MRH 268 - MRH 275)

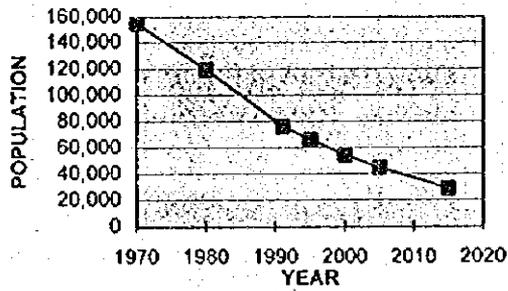
9. MRH 276/Col. de IRATI-RURAL



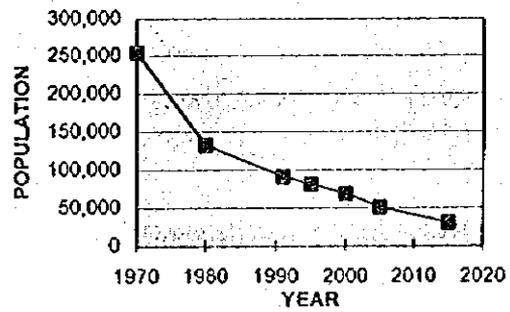
10. MRH 277/ALTO IVAI-RURAL



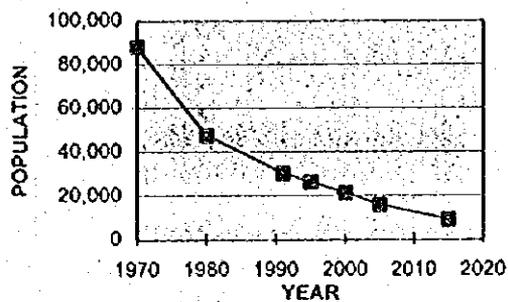
11. MRH 278/N. V. DE WENCESLAU B.-RURAL



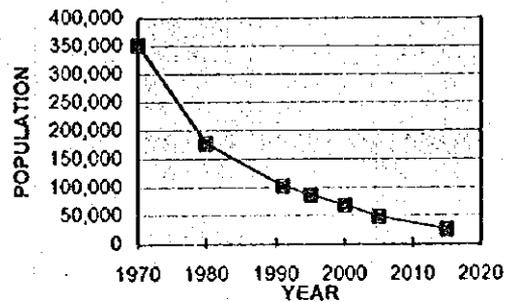
12. MRH 279/N. V. JACAREZINHO-RURAL



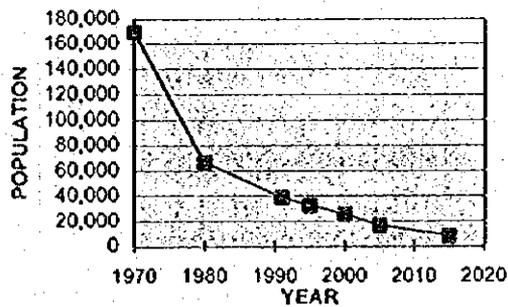
13. MRH 280/ALG. de ASSAI-RURAL



14. MRH 281/N. N. LONDRINA-RURAL



15. MRH 282/N. N. MARINGA-RURAL



16. MRH 283/N. Noviss. PARANAVAI-RURAL

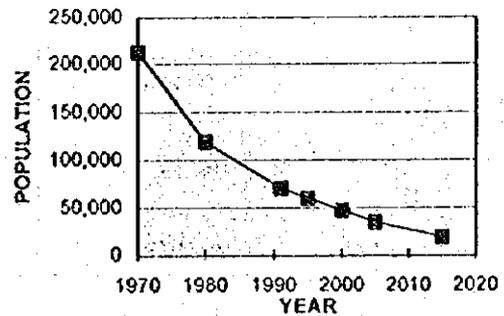


Figure - I.5 (2) Projected Rural Population per MRH (MRH 276 - MRH 283)

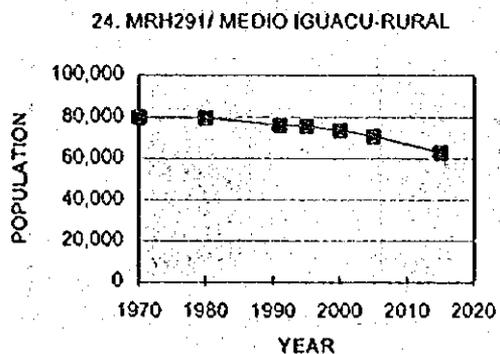
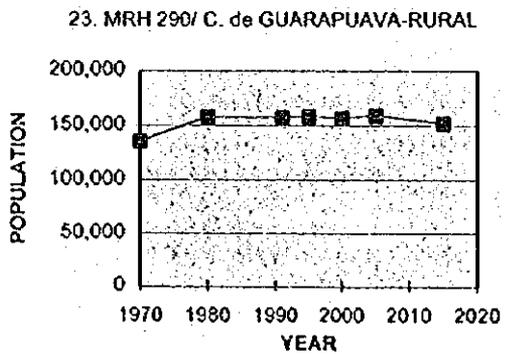
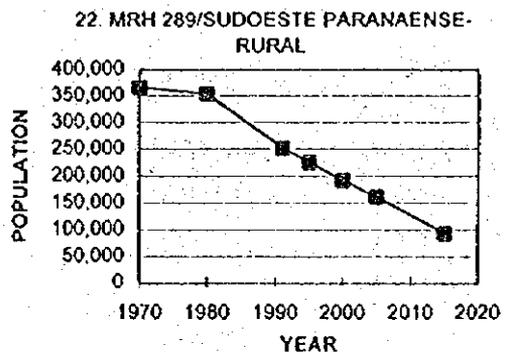
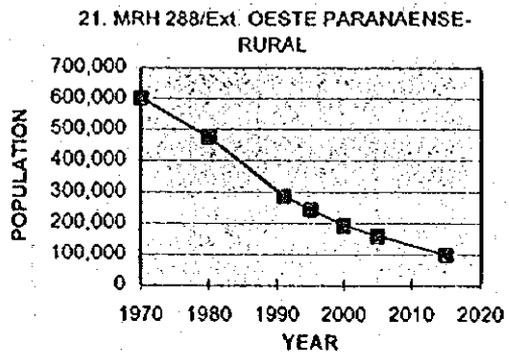
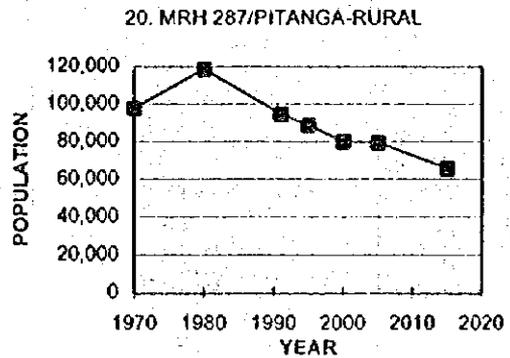
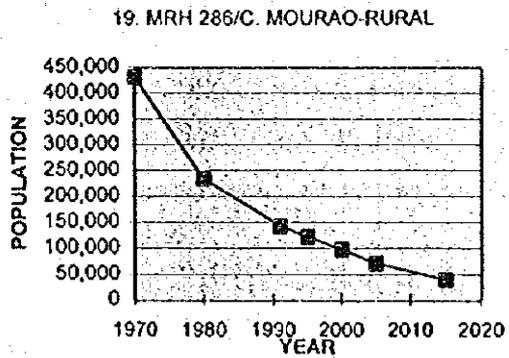
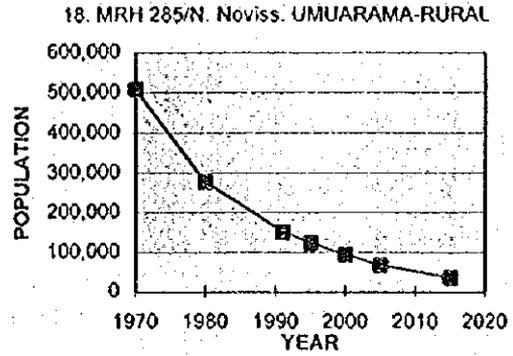
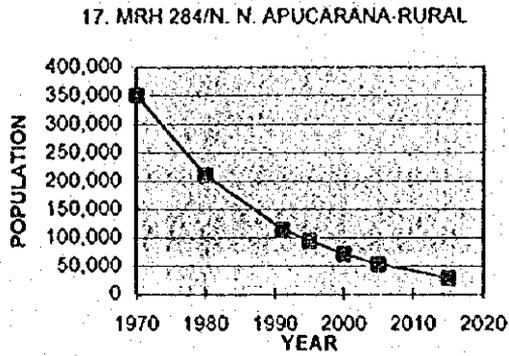
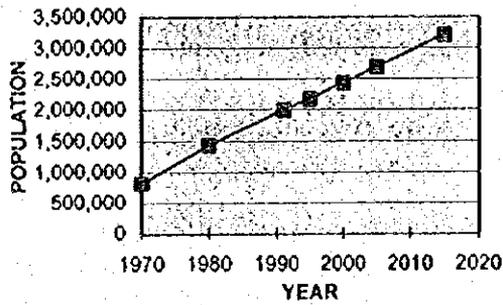
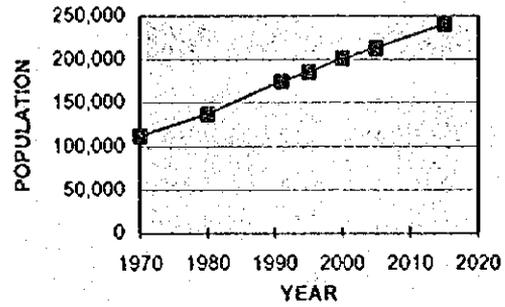


Figure - 1.5 (3) Projected Rural Population per MRH (MRH 284 - MRH 291)

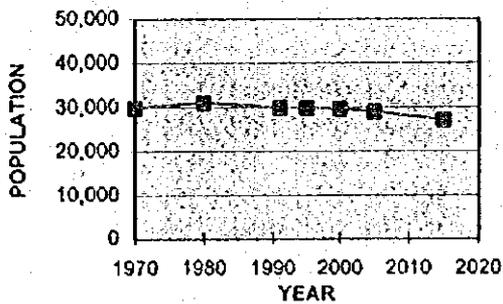
1. MRH 268/CURITIBA-TOTAL



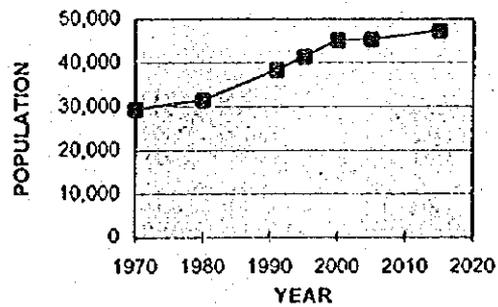
2. MRH 269/L. PARANAENSE-TOTAL



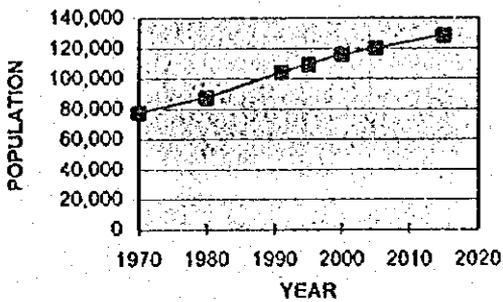
3. MRH 270/ALTO RIBEIRA-TOTAL



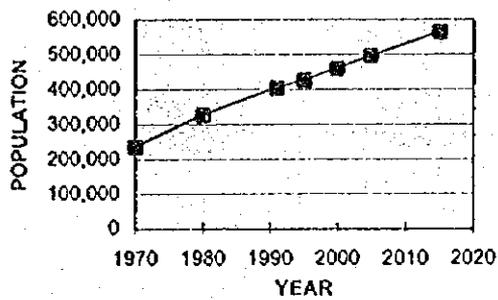
4. MRH 271/A. RIO NEGRO-TOTAL



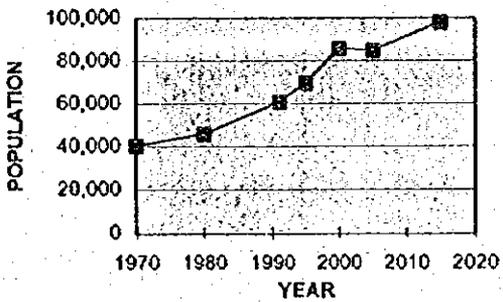
5. MRH 272/ C.da LAPA-TOTAL



6. MRH 273/C. de PONTA GROSSA-TOTAL



7. MRH 274/C. de JAGUARIAIVA-TOTAL



8. MRH 275/S. MATEUS do SUL-TOTAL

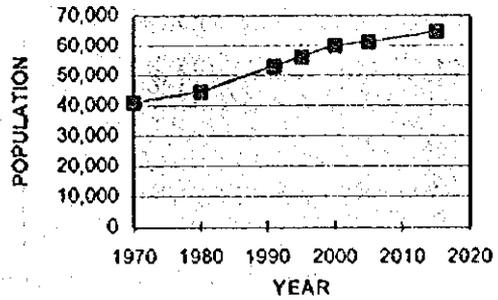


Figure - I.6 (1) Projected Total Population per MRH (MRH 268 - MRH 275)

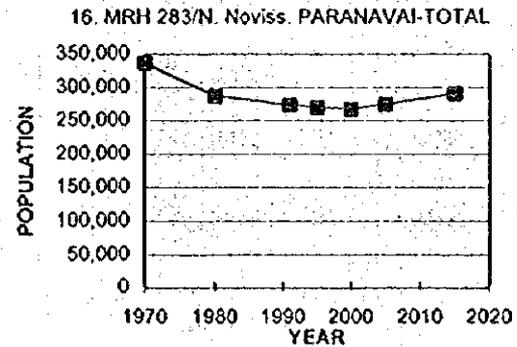
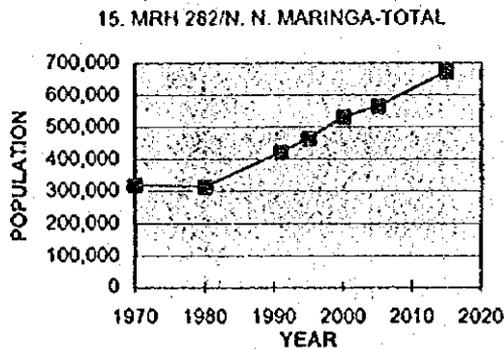
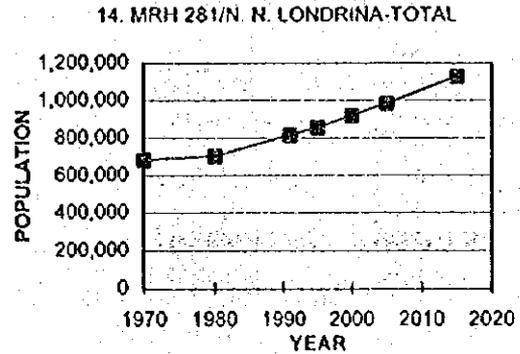
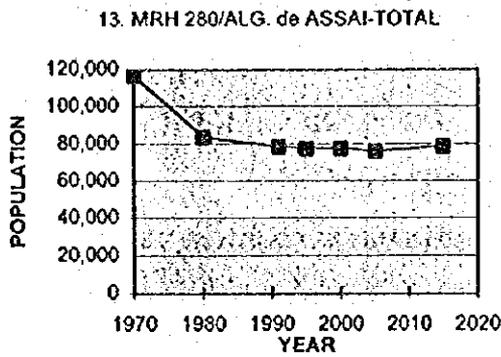
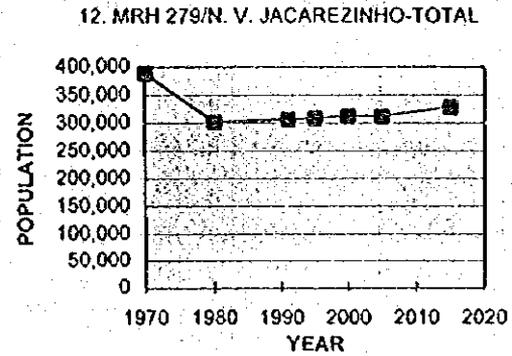
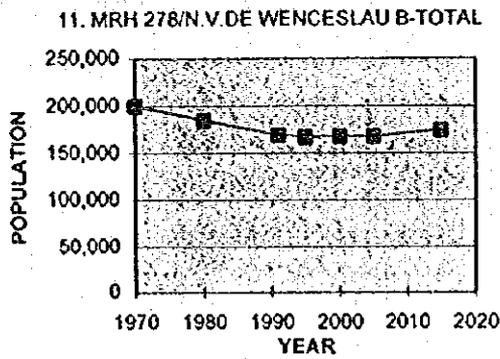
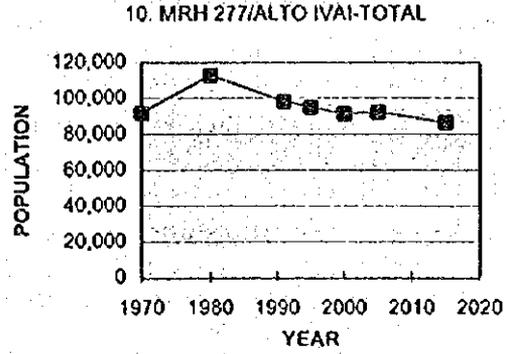
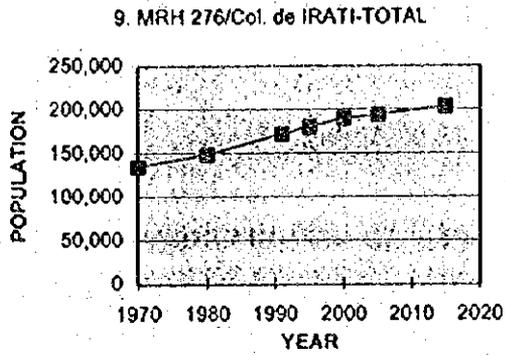
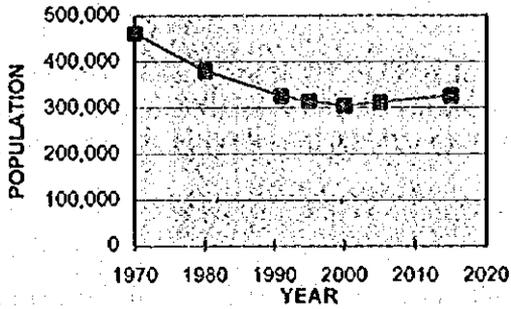
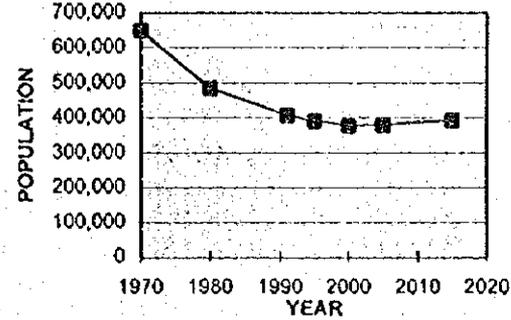


Figure - 1.6 (2) Projected Total Population per MRH (MRH 276 - MRH 283)

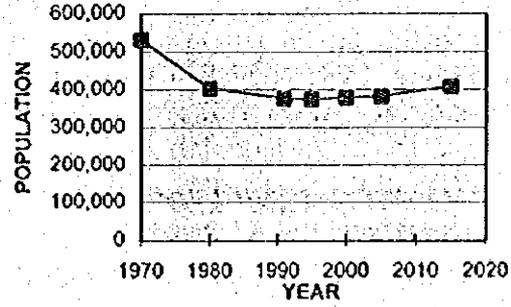
17. MRH 284/N. N. APUCARANA-TOTAL



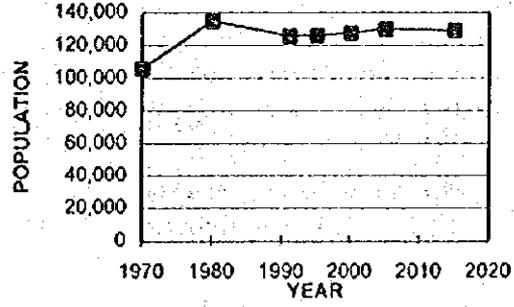
18. MRH 285/N. Noviss. UMUARAMA-TOTAL



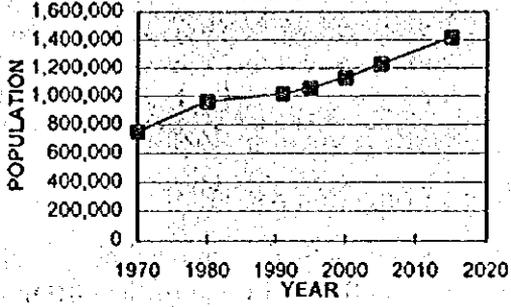
19. MRH 286/C. MOURAO-TOTAL



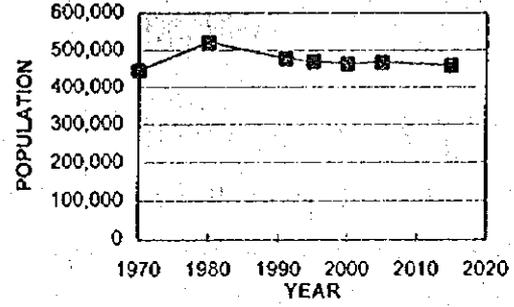
20. MRH 287/PITANGA-TOTAL



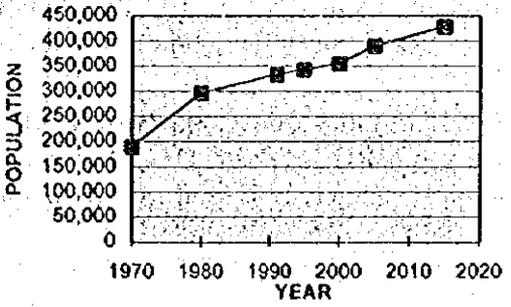
21. MRH 288/Ext. OESTE PARANAENSE-TOTAL



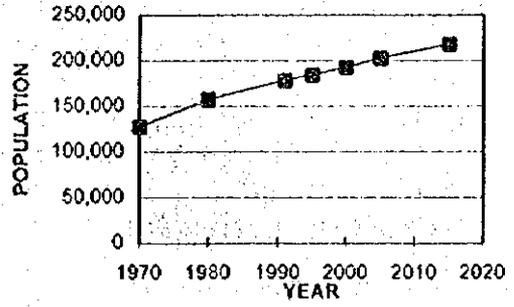
22. MRH 289/SUDOESTE PARANAENSE-TOTAL



23. MRH 290/ C. de GUARAPUÁVA-TOTAL



24. MRH291/ MEDIO IGUACU-TOTAL



Figüre - 1.6 (3) Projected Total Population per MRH (MRH 284 - MRH 291)

1.2.2 Gross Domestic Product (GDP) Projection

1) GDP of Paraná State

Based on the GDP's past tendency during the years of 1980 to 1991, provided by IPARDES (shown in Table - 1.9), GDP of Paraná State for the years of 1993, 2005 and 2015 was estimated by JICA Team as US\$ 27,111 million, US\$ 49,945 million and US\$ 81,354 million, respectively, with growth rate of 5.00%/year.

2) GDP of Paraná State per Sector

GDP of Paraná per Sector: Primary Sector/Agriculture, Livestock, Fishery and Extraction, Second Sector/Industry and Tertiary Sector/Commerce and Services, in 1993, was estimated by JICA Team based on the percentage of participation of each Sector in the total value added of Paraná State, provided by SEFA and IPARDES - *Municipalities' Participation Fund-Preliminary Indexes-95 (Fundo de Participação dos Municípios-Índices Preliminares-95-SEFA)*. GDP of Paraná per Sector for the target year, for the Primary Sector, Secondary Sector and Tertiary Sector was estimated as shown below in Table - 1.37, with growth rate of approximately 2.00%/year, 5.35%/year and 5.25%/year, respectively. However, it should be noted that the participation of the service sector in the Tertiary Sector was considered, for each year, the same portion of the year of 1989 (37.71% of the total value added of Paraná State) because there was not available data.

As a reference, GDP projection and projection of GDP per Sector for whole Brazil studied by ELETROBRÁS and COPEL was presented in Table - 1.46.

Table - 1.37 Estimated GDP-Paraná by Sector - 1993, 2005 and 2015

Year	Primary Sector		Secondary Sector		Tertiary Sector		GDP - Paraná	
	Million US\$	%	Million US\$	%	Million US\$	%	Million US\$	%
1993	3,149	11.32	9,295	33.42	15,367	55.26	27,811	100.00
2005	3,831	7.67	17,446	34.93	28,668	57.40	49,945	100.00
2015	4,874	5.99	29,110	35.78	47,370	58.23	81,354	100.00

Source: Fundo de Participação dos Municípios-Índices Provisórios/95 (Municipalities' Participation Fund- Preliminary Indexes/95)-SEFA

1.2.3 Gross Regional Domestic Product (GRDP) Projection per MRH

GRDP per MRH in 1993 was estimated by using the same method mentioned above, and GRDP per MRH in 2005 and 2015 was estimated based on the past trend of the GRDP of each MRH from 1980 to 1993.

According to this estimation, there are some remarkable points, as follows:

- GRDP of MRH 268/Curitiba will increase from approximately US\$ 10,540 million to US\$ 34,330 million until the target year of 2015 (more than three times the value of 1993) and will share almost 42% of GDP-Paraná.
- GRDP of the other four large MRH (MRH 273/Campos de Ponta Grossa, MRH 281/N.N. Londrina, MRH 282/N.N. Maringá and MRH 288/Extr. Oeste Paranaense (Cascavel, Foz do Iguaçu, etc.)) will increase approximately 185% and will account for 32% of GDP-Paraná in 2015.

However, it should be noted that:

- 1) the contribution, as energy production, of Hydroelectric Power Stations was calculated as value added of the Secondary Sector to GDP-Paraná and to GRDP of

- some MRH that have municipalities influenced by this contribution, from 1989 on;
- 2) estimation of GRDP per MRH based on the past trend and estimation of the expansion planning of the Electric Sector should be considered separately, and
 - 3) Therefore, GDP-Paraná and GDP-Paraná by Sector were estimated including this contribution, but GRDP per MRH, GRDP of Secondary Sector per MRH and GRDP per Capita per MRH (mentioned in next section) were estimated excluding this contribution.

This estimated GRDP per MRH is shown in Table-1.44.

1.2.4 GRDP Projection by Sector per MRH

GRDP by Sector (Primary and Secondary) per MRH in 1993 was estimated in the same manner mentioned before, and the GRDP by Sector per MRH in 2005 and 2015 was also estimated by using the same method of GRDP per MRH, while the Tertiary Sector per MRH could not be estimated because data concerning the participation of the service sector per MRH, which composes the Tertiary Sector together with the commercial sector, was not available. Estimated GRDP by Sector (Primary and Secondary) are shown in Table - 1.45.

1.2.5 Gross Domestic Product per Capita of Paraná State (GDP per Capita of Paraná State) and Gross Regional Domestic Product per Capita per MRH (GRDP per Capita per MRH)

Based on the estimated population (shown in Table - 1.43) and the estimated GDP-Paraná (shown in Table - 1.44), GDP per Capita of Paraná State in 1993, 2005 and 2015 was estimated at about US\$ 3,200, US\$ 5,000 and US\$ 7,300, respectively. In terms of GRDP per Capita per MRH, it can be seen that there is a great difference, in terms of regional productivity, between developed regions such as MRH 268/Curitiba and undeveloped regions such as MRH 272/Alto Ivai and MRH 287/Pitanga and that this difference will decrease in percentage (from approximately 1,200% to 900%) increasing, however, in value added (from about US\$ 4,500 to US\$ 9,500).

Estimated GDP per Capita of Paraná State and estimated GRDP per Capita per MRH are also shown in Table - 1.44.

1.2.6 Future Socio-Economic Framework

From a general point of view, in 2015:

- Approximately ten million people will live in urban areas and only one million people will live in rural areas;
- Primary Sector, Secondary Sector and Tertiary Sector will share approximately 6%, 36% and 58% of GDP-Paraná, respectively;
- GDP-Paraná will increase in about 200% and GDP per Capita in Paraná will increase in approximately 125%.

The future socio-economic structure of Paraná State can be estimated by classifying the 24 MRH into four categories in terms of urban population, GRDP and GRDP per Capita, and future socio-economic framework for the four categories in 2005 and 2015 can be drawn as shown in Table - 1.38 and Table - 1.39, respectively, and also can be drawn as shown in Figure - 1.8.

However, it should be noted that 1) the number of municipalities that compose each MRH varies considerably. For example, MRH 273/Campos de Ponta Grossa is composed only of five municipalities, while MRH 288/Extr. Oeste Paranaense is composed of 49 municipalities, 2) the land area, the number of medium urban centers and the degree of concentration of population in urban areas, for example, are also variable for each MRH.

Table - 1.38 Socio-Economic Framework of Paraná State in 2005

Classification	No. and Name of MRH	Urban Population		GRDP		GRDP per Capita US\$
		Population	%	million US\$	%	
1st	MRH 268/Curitiba	2,582,200	30.90	20,210.00	42.50	7,500.00
2nd	MRH 273/C. Ponta Grossa	441,200	5.30	2,870.00	6.00	5,780.00
	MRH 281/N.N. Londrina	935,700	11.20	3,860.00	8.10	3,920.00
	MRH 282/N.N. Maringá	548,500	6.60	2,930.00	6.20	5,180.00
	MRH 288/Extr. Oeste Paranaense	1,069,000	12.80	5,710.00	12.00	5,130.00
	Subtotal/Average	2,994,400	35.90	15,370.00	32.30	4,690.00
3rd	MRH 279/284/285/286/289/290	1,678,500	20.10	7,300.00	15.30	3,250.00
4th	MRH 269/270/271/272/274/275/276/277/278/280/283/287/291	1,095,100	13.10	4,710.00	9.90	2,780.00
TOTAL of MRH / Average		8,350,200	100.00	47,590.00	100.00	4,800.00

Remark : Total population per 2nd, 3rd and 4th Categories was 3,276,000, 2,245,400 and 1,691,600, respectively
: GRDP and GRDP per Capita per MRH are not including contribution of Hydroelectric Power Stations

Table - 1.39 Socio-Economic Framework of Paraná State in 2015

Classification	No. and Name of MRH	Urban Population		GRDP		GRDP per Capita US\$
		Population	%	million US\$	%	
1st	MRH 268/Curitiba	3,112,700	31.20	34,330.00	44.30	10,700.00
2nd	MRH 273/C. de Ponta Grossa	519,800	5.20	4,630.00	6.00	8,200.00
	MRH 281/N.N. Londrina	1,103,700	11.10	5,990.00	7.70	5,300.00
	MRH 282/N.N. Maringá	664,200	6.70	4,920.00	6.30	7,310.00
	MRH 288/Extr. Oeste Paranaense	1,320,500	13.30	9,050.00	11.70	6,370.00
	Subtotal/Average	3,608,200	36.30	24,590.00	31.70	6,490.00
3rd	MRH 279/284/285/286/289/290	1,964,200	19.70	11,110.00	14.30	4,740.00
4th	MRH 269/270/271/272/274/275/276/277/278/280/283/287/291	1,284,200	12.80	7,490.00	9.70	4,190.00
TOTAL of MRH / Average		9,969,300	100.00	77,320.00	100.00	6,960.00

Remark : Total population per 2nd, 3rd and 4th Categories was 3,787,700, 2,346,100 and 1,787,200, respectively
: GRDP and GRDP per Capita per MRH are not including contribution of Hydroelectric Power Stations

1.3 Alternative Regional Development Plan and Alternative Socio-Economic Framework

1.3.1 Future Socio-Economic Framework in Curitiba Metropolitan Area

Based on the study of Phase II, concerning the water development in the Metropolitan Area of Curitiba, the balance between water demand and water supply will be very tight. In addition to that, problems in water quality, solid waste and other environmental issues will be enlarged to the extent of threatening human life.

As mentioned in the previous Section, it is estimated that in the year of 2015 MRH 268/Curitiba will need a great amount of additional social infrastructure on which more than one million people live. It is also foreseeable that large areas of useful land and basic infrastructure will be required to enable this MRH to cope with the several problems that will be caused by the increase in economic activities, by three times, up to 2015.

1.3.2 Alternative Regional Development Plan

To solve the problems above, or to avoid the foreseeable problems mentioned above, JICA Team proposes an alternative regional development plan, as a strategy, with a concept of decentralization of socio-economic activities. It will be necessary to restrict the number of emigrants to Curitiba metropolitan area and to distribute them to the big MRH which have medium local urban centers, such as MRH 281/N. N. Londrina, MRH 288/Extr. Oeste Paranaense, MRH 282/N. N. Maringá, MRH 273/Campos de Ponta Grossa and others, which have the capacity and possibility to accept these immigrants.

(1) Outline of the Alternative Plan

Considering the concept mentioned above as well as the present regional economic activities, an outline of the alternative plan is composed as follows:

Composition of Three Urban Complexes.

a) MRH 281/Londrina and MRH 282/Maringá

To compose the urban axis /Londrina - Maringá/ with the neighboring municipalities, including part of MRH 284/Apucarana, as center of the north region in the State of Paraná.

b) MRH 288/Extr. Oeste Paranaense (Cascavel)

To compose the urban axis /Toledo-Cascavel-Foz do Iguacu/ as the center of the west region in Paraná State.

c) MRH 273/Ponta Grossa

To compose the urban axis /Ponta Grossa-Castro/ as a new development region near the metropolitan area of Curitiba.

It is needless to say, however, that this plan is still in a level of strategy and it is necessary to study this plan further on from the political and administrative point of view.

1.3.3 Alternative Socio-Economic Framework

(1) Restriction and Distribution of the Number of Emigrants

According to Table - 1.35, the increase of urban population in MRH 268/Curitiba is estimated in approximately 1,163,000 people, with an annual growth rate of 2.15% from the year of 1993 to the year of 2015. In order to find the reasonable ratio of restriction, the ratios of 30%, 40% and 50% were studied, respectively, relating them to the growth rate of the four main MRH and the State of Paraná.

As a result of this study, the ratio of 40%, which is equivalent to 253,000 emigrants in 2005, and 465,000 emigrants in 2015, and to about 15% of the estimated urban population of each year, is considered reasonable to be distributed to the four large MRH (MRH 273/Campos de Ponta Grossa, MRH 281/N. N. Londrina, MRH 282/N. N. Maringá and MRH 288/Extr. Oeste Paranaense - Cascavel, Foz do Iguacu, etc.), according to the proportion of each urban population in 2005 and 2015, as shown in Figure - 1.7 and Table - 1.43.

(2) Distribution of GRDP/Secondary and Tertiary Sectors in MRH 268/Curitiba

Consequently, 15% of the amount of the GRDP by Secondary Sector and Tertiary Sector in MRH 268, equivalent to US\$ 1,950 million and US\$ 750 million in 2005 and US\$ 5,100

million and US\$ 1,900 million in 2015, would be distributed to the same four large MRH, according to the same method mentioned above.

The restriction of MRH 268 and distribution for the four large MRH in 2005 and 2015 are shown below in Table - 1.40.

(3) Alternative Socio-Economic Framework

According to the restriction of the emigrants and economic activities (GRDP of Secondary Sector and Tertiary Sector) in MRH 268, and the distribution of these matters to the four large MRH, the alternative socio-economic framework in 2005 and 2015 can be estimated as shown in Table - 1.41 and Table - 1.42, respectively.

Table - 1.40 Restriction and Distribution of Urban Population, GRDP (Secondary and Tertiary Sector) and GRDP of Secondary Sector, in 2005 and 2015

No. and Name of MRH	2005				2015			
	%	Urban Population	GRDP (2nd and 3rd Sector) million US\$	GRDP of 2nd Sector million US\$	%	Urban Population	GRDP (2nd and 3rd Sector) million US\$	GRDP of 2nd Sector million US\$
MRH 268/Curitiba	100.00	(253,000)	(1,950.00)	(750.00)	100.00	(465,000)	(5,100.00)	(1,900.00)
MRH 273/C. Ponta Grossa	14.20	37,200	285.00	110.00	14.40	67,000	735.00	275.00
MRH 281/N.N. Londrina	31.30	79,200	610.00	235.00	30.60	142,200	1,560.00	580.00
MRH 282/N.N. Maringá	18.30	46,300	355.00	140.00	18.40	85,600	935.00	350.00
MRH 288/Extr. Oeste Paranaense	35.70	90,300	700.00	265.00	35.60	170,200	1,870.00	695.00

Remark: % is percentage of distribution per MRH
: The values of GRDP of Secondary Sector and Tertiary Sector are in current million US\$

Table - 1.41 Socio-Economic Framework of Paraná State in 2005 / Alternative Case

Classification	No. and Name of MRH	Urban Population		GRDP 2nd and 3rd Sectors		GRDP 2nd Sector	
		Population	%	million US\$	%	million US\$	%
1st	MRH 268/Curitiba	2,329,200	27.90	18,260.00	38.40	6,990.00	46.30
2nd	MRH 273/C. Ponta Grossa	478,400	5.70	3,150.00	6.60	1,150.00	7.90
	MRH 281/N.N. Londrina	1,014,900	12.20	4,470.00	9.40	1,470.00	9.80
	MRH 282/N.N. Maringá	594,800	7.10	3,290.00	6.90	1,270.00	8.40
	MRH 288/Extr. Oeste Paranaense	1,159,300	13.90	6,410.00	13.50	890.00	5.90
	Subtotal/Average	3,247,400	38.90	17,320.00	36.40	4,820.00	32.00
3rd	MRH 279/284/285/286/289/290	1,678,500	20.10	7,300.00	15.30	1,890.00	12.50
4th	MRH 269/270/271/272/274/275/276/277/278/280/283/287/291	1,095,100	13.10	4,210.00	9.90	1,390.00	9.20
	TOTAL of MRH / Average	8,350,200	100.00	47,590.00	100.00	15,090.00	100.00

Remark: Total population per 2nd, 3rd and 4th Categories was 3,276,000, 2,245,400 and 1,691,600, respectively
: GRDP and GRDP per Capita per MRH are not including contribution of Hydroelectric Power Stations

Table - 1.42 Socio-Economic Framework of Paraná State in 2015 / Alternative Case

Classification	No. and Name of MRH	Urban Population		GRDP 2nd and 3rd Sectors		GRDP 2nd Sector	
		Population	%	million US\$	%	million US\$	%
1st	MRH 268/Curitiba	2,647,200	26.60	29,230.00	37.70	10,940.00	43.30
2nd	MRH 273/C. de Ponta Grossa	566,800	5.90	5,360.00	6.90	2,030.00	8.00
	MRH 281/N.N. Londrina	1,245,900	12.50	7,550.00	9.70	2,640.00	10.50
	MRH 282/N.N. Maringá	749,800	7.50	5,860.00	7.60	2,410.00	9.50
	MRH 288/Extr. Oeste Paranaense	1,490,700	15.00	10,920.00	14.10	1,540.00	6.10
	Subtotal/Average	4,073,200	40.90	29,690.00	38.30	8,620.00	34.10
3rd	MRH 279/284/285/286/289/290	1,964,200	19.70	11,110.00	14.30	3,370.00	13.30
4th	MRH 269/270/271/272/274/275/276/277/278/280/283/287/291	1,284,200	12.80	7,490.00	9.70	2,340.00	9.30
	TOTAL of MRH / Average	9,969,300	100.00	77,520.00	100.00	25,270.00	100.00

Remark: Total population per 2nd, 3rd and 4th Categories was 3,787,700, 2,345,100 and 1,787,200, respectively
: GRDP and GRDP per Capita per MRH are not including contribution of Hydroelectric Power Stations

Table 1.43 Projected Population in Paraná State per MRH - 2005 and 2015 / Alternative Case

No of the MRH/Name of Region	2005				2015			
	Urban	%	Rural	Total	Urban	%	Rural	Total
				%				%
01. MRH 268/CURITIBA	2,329,200	27.89	113,700	2,442,900	2,647,700	26.56	96,700	2,744,400
02. MRH 269/L. PARANAENSE	180,500	2.16	32,700	213,200	210,000	2.11	30,100	240,100
03. MRH 270/ALTO RIBEIRA	7,300	0.09	21,600	28,900	8,800	0.09	18,400	27,200
04. MRH 271/A. RIO NEGRO	9,100	0.11	36,200	45,300	11,200	0.11	36,100	47,300
05. MRH 272/ C. LAPA	73,600	0.88	46,400	120,000	84,800	0.85	44,100	128,900
06. MRH 273/C.PONTA GROSSA	478,400	5.73	55,400	533,800	586,800	5.89	44,800	631,600
07. MRH 274/C.JAGUARIAIVA	69,300	0.83	15,600	84,900	87,400	0.88	10,700	98,100
08. MRH 275/S. MAT. do SUL	26,300	0.31	35,000	61,300	31,500	0.32	33,100	64,600
09. MRH 276/Col. IRATI	90,400	1.08	103,300	193,700	105,900	1.06	97,300	203,200
10. MRH 277/ALTO IVAI	32,600	0.39	59,500	92,100	39,700	0.40	46,600	86,300
11. MRH 278/N. V. WENCESLAU BRAZ	123,300	1.48	45,000	168,300	145,700	1.46	28,900	174,600
12. MRH 279/N. V. JACAREZINHO	262,100	3.14	50,900	313,000	298,200	2.99	30,600	328,800
13. MRH 280/Alç. ASSAI	60,200	0.72	15,900	76,100	69,500	0.70	9,200	78,700
14. MRH 281/N. N. LONDRINA	1,014,900	12.15	48,600	1,063,500	1,245,900	12.50	26,000	1,271,900
15. MRH 282/N. N. MARINGA	594,800	7.12	16,800	611,600	749,800	7.52	8,400	758,200
16. MRH 283/N. Novis. PARANAVAI	240,200	2.88	35,000	275,200	271,500	2.73	19,500	291,000
17. MRH 284/N. N. APUCARANA	237,900	3.09	53,900	311,800	297,300	2.99	29,200	326,500
18. MRH 285/N. Novis. UMUARAMA	312,000	3.74	68,500	380,500	357,800	3.59	36,000	393,800
19. MRH 286/C. MOURAO	310,400	3.72	72,000	382,400	368,600	3.70	40,500	409,100
20. MRH 287/PITANGA	50,600	0.61	79,400	130,000	63,400	0.64	65,900	129,300
21. MRH 288/Extr. Oeste PARANAENSE	1,159,300	13.88	160,800	1,320,100	1,490,700	14.95	100,300	1,591,000
22. MRH 289/Sudoeste PARANAENSE	305,400	3.66	162,100	467,500	366,300	3.68	93,500	459,800
23. MRH 290/ C. GUARAPUAVA	230,700	2.76	159,300	390,000	276,000	2.77	152,100	428,100
24. MRH291/ MEDIO IGUAÇU	131,700	1.58	70,900	202,600	154,800	1.55	63,100	217,900
TOTAL OF PARANA STATE	8,350,200	100.00	1,558,700	9,908,900	9,969,300	100.00	1,161,100	11,130,400

Remark: Projected by JICA Team

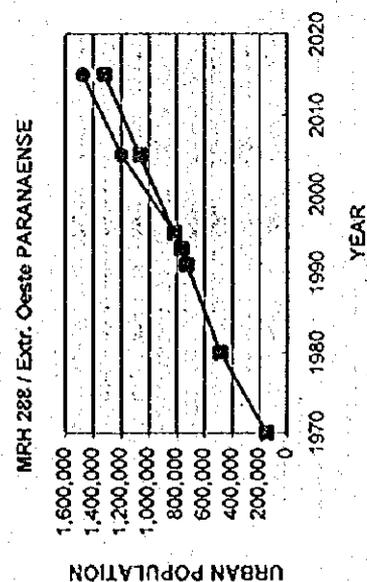
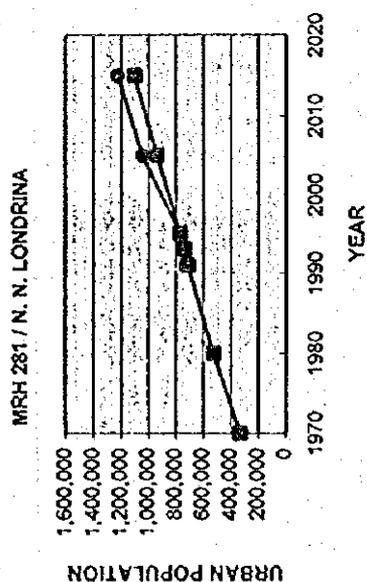
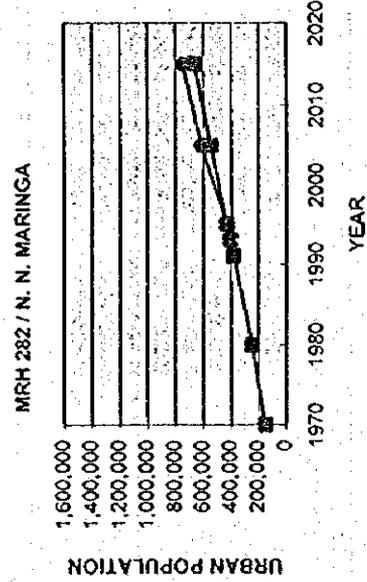
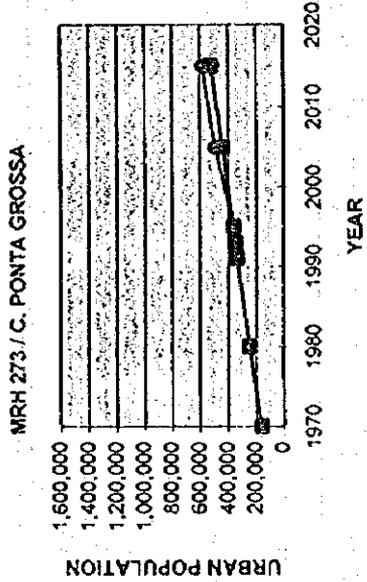
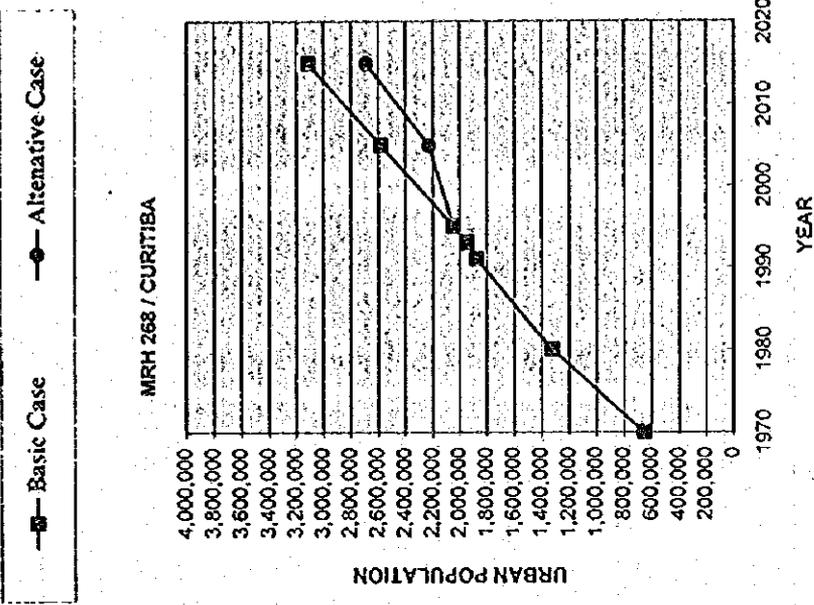


Figure - 1.7 Projected Urban Population for MRH 268, MRH 275, MRH 281, MRH 282 and MRH 288 by Alternative Case

Table - 1.44 Estimated GRDP per MRH and GRDP per Capita per MRH in 1993, 2005 and 2015

No. and Name of MRH	GRDP / MRH (Million US\$)			GRDP per Capita (US\$)		
	1993	2005	%	1993	2005	%
1. MRH 268/CURITIBA	10,538.30	20,213.73	42.47	5,080.00	7,500.00	163.87
2. MRH 269/L. PARANAENSE	442.86	732.61	1.54	2,470.00	3,430.00	79.68
3. MRH 270/ALTO RIBEIRA	44.18	77.41	0.16	1,480.00	2,680.00	47.74
4. MRH 271/A. RIO NEGRO	32.22	61.37	0.13	810.00	1,350.00	26.13
5. MRH 272/ C.da LAPA	362.82	667.94	1.40	3,400.00	5,570.00	109.68
6. MRH 273/C. de PONTA GROSSA	1,545.30	2,870.83	6.03	3,750.00	5,780.00	120.32
7. MRH 274/C. de JAGUARUAIVA	294.55	660.63	1.39	4,560.00	7,780.00	147.10
8. MRH 275/S. MATEUS do SUL	85.74	160.89	0.34	1,570.00	2,620.00	50.65
9. MRH 276/Col. de IRAI	200.53	383.82	0.81	1,140.00	1,980.00	36.77
10. MRH 277/ALTO IVAI	42.78	69.22	0.15	450.00	750.00	14.52
11. MRH 278/N. V. DE WENCESLAU B.	149.02	216.28	0.45	890.00	1,290.00	28.71
12. MRH 279/N. V. JACAREZINHO	664.9	1,013.13	2.13	2,160.00	3,240.00	69.68
13. MRH 280/ALG. de ASSAI	135.06	171.29	0.36	1,740.00	2,250.00	56.13
14. MRH 281/N. N. LONDRINA	2,344.76	3,862.85	8.12	2,810.00	3,920.00	90.65
15. MRH 282/N. N. MARINGA	1,510.93	2,931.00	6.16	3,430.00	5,180.00	110.65
16. MRH 283/N. Noviss. PARANAVAI	375.86	515.05	1.08	1,390.00	1,870.00	44.84
17. MRH 284/N. N. AFUCARANA	556.79	857.07	1.80	1,750.00	2,750.00	56.45
18. MRH 285/N. Noviss. UMUARAMA	594.16	626.05	1.32	1,490.00	1,650.00	48.06
19. MRH 286/C. MOURAO	850.96	1,252.64	2.63	2,270.00	3,280.00	73.23
20. MRH 287/PITANGA	101.33	198.64	0.42	810.00	1,530.00	26.13
21. MRH 288/Ext. OESTE PARANAENSE	3,234.55	5,711.90	12.00	3,140.00	4,640.00	101.29
22. MRH 289/SUDOESTE PARANAENSE	1,006.21	1,545.04	3.25	2,130.00	3,300.00	68.71
23. MRH 290/ C. de GUARAPUAVA	1,022.30	2,000.58	4.20	3,030.00	5,130.00	97.74
24. MRH291/ MEDIO IGUAU	452.69	790.96	1.66	2,500.00	3,900.00	80.65
Subtotal of MRH/Average of MRH	26,588.80	47,590.93	100.00	3,100.00	4,800.00	100.00
Contribution of Hydroelectric Power Stations	1,222.20	2,354.07	---	---	---	---
Total of the STATE/Average of the STATE	27,811.00	49,945.00	---	3,240.00	5,040.00	---

Source: Estatística Econômico-Financeira (Finance Economic Statistics) 74/85, 86/87, 88/89 and 91/93 - SEFA; Fundo de Participação dos Municípios - Índices Provisórios - 95

(Municipalities' Participation Fund - Preliminary Indexes - 95) - SEFA

Remark: Values in 2005 and 2015 were projected by JICA Team

: % of GRDP per Capita means ratio from average of Paraná State

Table -1.45 Estimated GRDP per MRH/Primary Sector and Secondary Sector/ in 1993, 2005 and 2015

No. and Name of MRH	PRIMARY SECTOR						SECONDARY SECTOR					
	GRDP / MRH (Million US\$)		%		%		GRDP / MRH (Million US\$)		%		%	
	1993	2005	1993	2015	1993	2015	1993	2005	1993	2015	1993	2015
1. MRH 268/CURITIBA	55.82	1.77	75.77	1.98	102.35	2.10	4,261.84	52.79	7,743.53	51.31	12,844.63	50.82
2. MRH 269/L. PARANAENSE	4.33	0.14	6.11	0.16	7.80	0.16	42.92	0.53	17.01	0.11	8.75	0.03
3. MRH 270/ALTO RIBEIRA	7.12	0.23	12.29	0.32	19.98	0.41	14.89	0.18	22.65	0.15	35.03	0.14
4. MRH 271/A. RIO NEGRO	10.14	0.32	12.19	0.32	15.11	0.31	6.77	0.08	12.89	0.09	24.16	0.10
5. MRH 272/ C.da LAPA	75.47	2.40	110.70	2.89	163.77	3.36	144.48	1.79	259.40	1.72	461.01	1.82
6. MRH 273/C. de PONTA GROSSA	171.57	5.45	262.20	6.84	362.14	7.43	530.69	6.57	1,076.90	7.14	1,753.81	6.94
7. MRH 274/C. de JAGUARUAIVA	58.20	1.85	89.57	2.34	129.16	2.65	147.34	1.83	371.52	2.46	714.92	2.83
8. MRH 275/S. MATEUS do SUL	22.69	0.72	29.51	0.77	40.94	0.84	30.25	0.37	48.95	0.32	91.88	0.36
9. MRH 276/Col. de IRAI	49.17	1.56	76.48	2.00	109.67	2.25	53.75	0.67	102.17	0.68	179.22	0.71
10. MRH 277/ALTO IVAI	19.03	0.60	22.60	0.59	27.29	0.56	4.78	0.06	8.30	0.05	14.90	0.06
11. MRH 278/N. V. DE WENCESLAU B.	58.67	1.86	53.63	1.40	56.54	1.16	10.44	0.13	29.97	0.20	61.21	0.24
12. MRH 279/N. V. JACAREZINHO	180.86	5.74	215.88	5.64	259.30	5.32	147.34	1.83	289.03	1.92	472.99	1.87
13. MRH 280/ALG. de ASSAI	61.62	1.96	69.10	1.80	71.65	1.47	32.52	0.40	40.37	0.27	49.03	0.19
14. MRH 281/N. N. LONDRINA	311.08	9.88	383.35	10.01	486.43	9.98	654.41	8.11	1,235.39	8.19	2,060.31	8.15
15. MRH 282/N. N. MARINGA	199.17	6.32	310.59	8.11	442.07	9.07	532.35	6.59	1,132.77	7.51	2,059.37	8.15
16. MRH 283/N. Noviss. PARANAVAI	108.97	3.46	93.05	2.43	84.81	1.74	98.39	1.22	198.55	1.32	353.60	1.40
17. MRH 284/N. N. APUCARANA	122.17	3.88	125.62	3.28	139.88	2.87	152.55	1.89	359.04	2.38	632.91	2.50
18. MRH 285/N. Noviss. UMUARAMA	154.68	4.91	89.03	2.32	55.56	1.14	128.48	1.59	241.83	1.60	418.13	1.65
19. MRH 286/C. MOURAO	282.36	8.97	309.39	8.08	366.04	7.51	152.11	1.88	286.98	1.90	496.73	1.97
20. MRH 287/PITANGA	39.16	1.24	56.90	1.49	79.45	1.63	5.59	0.07	11.27	0.07	20.06	0.08
21. MRH 288/Ext. OESTE PARANAENSE	675.86	21.46	860.00	22.45	1,116.14	22.90	424.10	5.25	626.89	4.15	850.15	3.36
22. MRH 289/SUDOESTE PARANAENSE	239.34	7.60	234.31	6.12	272.46	5.59	168.98	2.09	400.32	2.65	746.02	2.95
23. MRH 290/ C. de GUARAPUAVA	165.60	5.26	231.38	6.04	329.48	6.76	180.50	2.24	315.38	2.09	600.43	2.38
24. MRH291/ MEDIO IGUAÇU	75.92	2.41	101.37	2.65	135.98	2.79	147.33	1.83	260.82	1.73	323.05	1.28
Subtotal of MRH	3,149.00	100.00	3,831.00	100.00	4,874.00	100.00	8,072.80	100.00	15,091.93	100.00	25,272.30	100.00
Contribution of Hydroelectric Power Stations	---	---	---	---	---	---	1,222.20	---	2,354.07	---	3,837.70	---
TOTAL OF THE STATE	3,149.00	---	3,831.00	---	4,874.00	---	9,295.00	---	17,446.00	---	29,110.00	---

Source: Estatística Econômico-Financeira (Finance Economic Statistics) 74/85, 86/87, 88/89 and 91/93 - SEFA; Fundo de Participação dos Municípios - Índices Provisórios - 95 (Municipalities' Participation Fund - Preliminary Indexes - 95) - SEFA

Remark: Values in 2005 and 2015 were projected by JICA Team

Table - 1.46 Alternative Scenario for Annual Growth Rate of Production by ELETROBRÁS/COPEL (Reference)

	1990 - 1995	1995 - 2000	2000 - 2005	2005 - 2010	2010 - 2015	Average Annual Growth Rate	Sectoral Participation at 2015
Scenario I	%	%	%	%	%	%	%
Production of Agriculture and Livestock Breeding	2.0	2.5	4.0	4.0	4.0	3.29	10.6
Industrial Production	0.8	1.3	6.0	3.5	3.5	4.21	33.8
Service Production	2.0	2.3	4.6	4.3	4.3	3.49	55.6
GDP - Brazil	1.6	2.0	5.0	4.0	4.0	3.31	100.0
Scenario II							
Production of Agriculture and Livestock Breeding	2.5	4.0	4.0	4.0	4.0	3.70	9.9
Industrial Production	1.0	5.5	5.5	3.5	3.5	3.78	34.6
Service Production	2.5	4.9	4.9	4.36	4.3	4.18	55.5
GDP - Brazil	2.0	5.0	5.0	4.0	4.0	3.99	100.0
Scenario III							
Production of Agriculture and Livestock Breeding	4.0	4.0	4.0	4.0	4.0	4.00	8.0
Industrial Production	3.6	6.5	5.5	4.7	4.7	4.99	35.0
Service Production	3.9	6.0	6.6	5.3	5.3	5.41	57.0
GDP - Brazil	3.8	6.0	6.0	5.0	5.0	5.16	100.0
Scenario IV							
Production of Agriculture and Livestock Breeding	4.0	4.5	4.0	4.0	4.0	4.10	6.1
Industrial Production	3.6	7.5	5.0	5.0	5.0	5.20	30.2
Service Production	3.9	7.1	6.9	6.8	6.7	6.26	63.8
GDP - Brazil	3.8	7.0	6.0	6.0	6.0	5.75	100.0

Source: ELETROBRÁS and COPEL/National Plan of Electrical Energy 1993-2015.

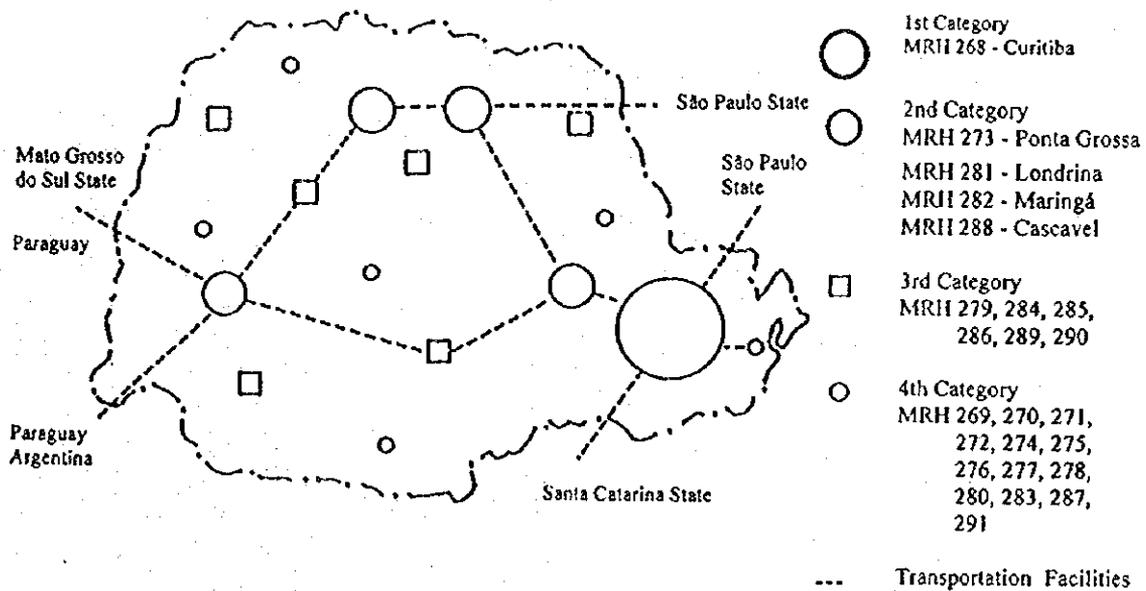


Figure - 1.8 Conceptual Diagram of Future Socio-Economic Framework

CHAPTER 2 MASTER PLAN FOR IGUAÇU RIVER BASIN

2.1 Regional Unit and Zoning of the Study

According to the regional unit of collected data concerning the socio-economic area, it was decided to use the municipalities as a regional unit. Therefore, the zoning lines for the Study were drawn following the boundary lines of the municipalities. However, as the Study should be made by river basin, it was decided to use the following criteria for inclusion (or exclusion) of municipalities that straddle other river basins, in the zoning of the Study:

- All municipalities that have their urban center located within the river basin, regardless if only a part of the urban area is inside the river basin, were included in the zoning.
- If the urban center of the municipality is not included in this basin, but there is a chance that this municipality will start to use a small river that belongs to this river basin in the future, the municipality is included in the zoning.
- In the case of only a small part of the rural area of the municipality, approximately less than 10% of total area, be included in this river basin, the municipality is excluded of the zoning.
- It was considered the recommendation of the Counterpart Team as to the inclusion of municipalities in the zoning, in accordance to the criteria, such as water supply system of undertakers.

The zoning for this river basin is composed of 101 municipalities, and is presented in Figure-2.1.

2.2 Present Socio-Economic Structure

2.2.1 Population per Municipality

Based on the census of 1970, 1980 and 1991, issued by IBGE and provided by IPARDES, the population per Municipality, in each year, of the 101 municipalities that compose the Study's zoning area are shown in Table - 2.2 (1), Table - 2.2 (2) and Table - 2.2 (3) divided per MRH (Homogeneous Micro-Regions) - refer to data concerning population per MRH (shown in Table - 1.8). It is important to say that some municipalities have been created recently and, therefore, these new municipalities do not have the number of inhabitants included in the table mentioned above.

2.2.2 Gross Regional Domestic Product (GRDP) per Municipality

Based on the estimated GRDP per MRH (shown in Table - 1.12), on the data of Financial Economic Statistics - 74/85, 86/87, 88/89 issued by SEFA and on the Municipalities' Participation Fund - Preliminary Indexes - 95, issued by SEFA, the GRDP of the 101 municipalities from the years of 1981 to 1991 was estimated and is shown in Table - 2.3 (1), Table - 2.3 (2) and Table - 2.3 (3).

2.2.3 GRDP by Secondary Sector per Municipality

GRDP by Secondary Sector per Municipality, during the year of 1981 to 1991, was estimated based on the same data mentioned above and is shown in Table - 2.4 (1), Table - 2.4 (2) and Table - 2.4 (3).

2.2.4 Present Socio-Economic Framework

Based on the population per Municipality in 1881 and 1991 (shown in Table - 2.2 (1), Table - 2.2 (2) and Table - 2.2 (3)) and GRDP per Municipality in 1981 and 1991 (shown in Table - 2.2 (1), Table - 2.2 (2) and Table - 2.2 (3)), present socio-economic framework of this river basin was estimated and conceived through the classification of the 101 municipalities into four Categories, and is presented in Table - 2.1, with their participation, in percentage.

There are two remarkable points, as follows:

- Curitiba had the share of about 50% and 34% in this river basin's urban population and GRDP in 1980 (or 1981), respectively. However, in 1991 the share of urban population decreased in approximately 45% and the one of GRDP increased in about 45%.
- 11 large and medium size municipalities (classified in 1st and 2nd class) concentrated about 75% of the urban population and 77% of the GRDP of this river basin in 1980 (or 1981) and, in 1991, the share of urban population was also about 75%. However, the share of GRDP had increased to approximately 82%.

It should however be noted that:

- Various municipalities have been created from 1980 to 1993, as it has been mentioned in Section - 1. For example, the figures of urban population of Pinhais and Fazenda Rio Grande, mentioned in Table - 2.1, were included in the ones of Piraquara and Mandirituba, respectively.
- In the same way as the GRDP of Foz do Iguaçu in 1991, the GRDP of some other municipalities, in 1991, included contribution of hydroelectric power stations.

Table - 2.1 Classification of Municipalities Related to Urban Population and GRDP per Municipality in 1980 and 1991/Iguacu River Basin

Classification	No. and Name of MRH	No. and Name of Municipality	1980			1991			GRDP		
			Urban Population		GRDP Million US\$	Urban Population		GRDP Million US\$	GRDP		
			Population	%		Population	%		Million US\$	%	
1st Class	MRH 268/Curitiba	9	1,024,973	49.82	2,649.06	34.40	1,315,035	45.35	5,839.48	40.97	
2nd Class	MRH 268/Curitiba	1	27,063	1.32	20.14	0.26	59,080	2.04	42.62	0.30	
		2	27,128	1.32	2,125.32	27.60	54,262	1.87	1,791.80	12.57	
		7	54,979	2.67	64.02	0.83	110,273	3.80	132.86	0.93	
		10							9.72	0.07	
		13							175.79	1.23	
		17		56,804	2.76	140.66	1.83	111,952	3.86	564.85	3.96
		274		123,698	6.01	384.41	4.99	177,766	6.13	459.52	3.22
		282		101,330	4.92	140.00	1.82	186,385	6.43	2,175.84	15.26
		327		28,289	1.37	104.14	1.35	45,622	1.57	128.63	0.90
		MRH 290/Campos de Guarapuava	352	89,951	4.37	301.69	3.92	116,210	4.01	410.19	2.88
		Subtotal		509,242	24.75	3,280.58	42.60	861,550	29.71	5,891.62	41.33
	3rd Class	MRH 268/Curitiba	5	3,783	0.18	7.40	0.10	12,722	0.44	33.08	0.23
		6	37,401	1.82	159.74	2.07	53,892	1.86	258.31	1.81	
		14	60,927	2.96	35.69	0.46	91,438	3.15	14.26	0.10	
		15	3,493	0.17	33.18	0.43	8,132	0.28	49.84	0.35	
		MRH 277/Campos da Iapa	33	17,374	0.84	35.03	0.45	19,472	0.67	66.28	0.46
		36	15,838	0.77	76.74	1.00	20,200	0.70	123.94	0.87	
		MRH 275/São Mateus do Sul	48	11,430	0.56	27.91	0.36	15,927	0.55	56.46	0.40
		MRH 288/Extr. Oeste Paranaense	294	24,375	1.18	88.36	1.15	29,572	1.02	84.48	0.59
		MRH 289/Sudoeste Paranaense	324	12,236	0.60	58.72	0.76	22,202	0.77	129.97	0.91
		333	31,470	1.53	93.16	1.21	43,406	1.50	111.32	0.78	
		MRH 290/Campos de Guarapuava	351					5,690	0.20	14.33	0.10
		MRH 291/Médio Iguacu	367	16,732	0.81	65.94	0.86	24,890	0.86	52.64	0.37
	371	35,516	1.73	91.87	1.19	40,201	1.39	135.15	0.95		
	Subtotal		270,625	13.15	773.74	10.05	387,744	13.37	1,130.06	7.93	
4th Class	Other 77 Municipalities		252,706	12.28	997.00	12.95	355,487	11.57	1,392.78	9.77	
	TOTAL OF THE MUNICIPALITIES OF THE BASIN		2,057,548	100.00	7,700.38	100.00	2,899,816	100.00	14,253.94	100.00	

Remark: GRDP per Municipality listed in 1980 was in 1981
: million US\$ is US\$

Municipalities in Iguaçu River Basin

No. and Name of MRH	No.	Name	Urban Area No. and Name of MRH	No.	Name	Urban Area No. and Name of MRH	No.	Name	Urban Area No. and Name of MRH	No.	Name	Urban Area	Urban Area	
MRH 268 Caribé	1	Alm. Terrenos*	MRH 272 Campo de Lupa	32	Campo de Terrenos*	MRH 279 Subsistema Paranaense	316	Amparo*	Y	MRH 279 Subsistema Paranaense (cont)	344	São João*	Y	
	2	Armadaz*		33	Lupa*		317	Serra Nova*			345	São João do Oeste*		
	3	Bela Nova*		34	Palmeiras*		318	Boa Esperança do Iguaçu*			346	Saudade do Iguaçu*		
	5	Campinas Grande do Sul*		35	Primeiras Anzinas*		319	Boa Sazona do Sul*			347	Sulina*		
	6	Campo Largo*		36	Rio Negro*		320	Capangas*			348	Yvaté*		
	7	Colônia*		46	Antônio Olavo*		321	Christópolis*			349	Vale do Rio		
	8	Conceição*		47	São João Trindade*		322	Carmesí Viriáta*			MRH 290 Campos de Coqueiros	350		Campos*
	9	Coritiba*		48	São Mateus do Sul*		323	Cruzeiro do Iguaçu*				351		Castroglor*
	MRH 271 Alto Rio Negro	10	Fazenda Rio Grande*	MRH 276 Col. de Ivaí	50	Ivaí*	Y	324	Divas Vozinhas*					
		12	Manduaçu*		51	Mallet*		325	Quatipuru*					
		13	Peabiru*	53	Repinha*	326		Erécin Marquet*						
		14	Periquety*	54	Rio Azul*	327		Rio de São do Sul*						
		15	Quatro Barras*	269	S. Vitor Amadida*	328		Francisco Bortolin*						
		17	S. João dos Pinhais*	270	C. União Marquet*	329		Nepomuceno do Oeste*						
		28	Agulhas do Sul*	271	Campos*	330		Munizópolis*						
		29	Itaipu*	272	Casimiro*	331		N. Esperança do Sul*						
		30	Quatimbuá*	273	Casimiro*	332		N. Ponta do Iguaçu*						
31		Tijucas do Sul*	274	Casimiro*	333	Praia Branca*								
MRH 278 Alto Rio Negro	275	Casimiro*	MRH 288 Ext. Oeste Paranaense	275	Casimiro*	Y	334	Ponte do Oeste*						
	276	Cin. Azul*		276	Cin. Azul*		335	N. Ponta do Iguaçu*						
	277	Itaipu*		277	Itaipu*		336	Ponte do Oeste*						
	278	Itaipu*		278	Itaipu*		337	Prado do Sul*						
	279	Itaipu*		279	Itaipu*		338	Prado do Sul*						
	280	Itaipu*		280	Itaipu*		339	Prado do Sul*						
	281	Itaipu*		281	Itaipu*		340	Salgado Filho*						
	282	Itaipu*		282	Itaipu*		341	S. João do Oeste*						
	283	Itaipu*		283	Itaipu*		342	S. João do Oeste*						
	284	Itaipu*		284	Itaipu*		343	S. João do Oeste*						
	285	Itaipu*		285	Itaipu*		344	S. João do Oeste*						
	286	Itaipu*		286	Itaipu*		345	S. João do Oeste*						
	287	Itaipu*		287	Itaipu*		346	S. João do Oeste*						
	288	Itaipu*		288	Itaipu*		347	S. João do Oeste*						
	289	Itaipu*		289	Itaipu*		348	S. João do Oeste*						
	290	Itaipu*		290	Itaipu*		349	S. João do Oeste*						
	291	Itaipu*		291	Itaipu*		350	S. João do Oeste*						
	292	Itaipu*		292	Itaipu*		351	S. João do Oeste*						
	293	Itaipu*		293	Itaipu*		352	S. João do Oeste*						
	294	Itaipu*		294	Itaipu*		353	S. João do Oeste*						
	295	Itaipu*		295	Itaipu*		354	S. João do Oeste*						
	296	Itaipu*		296	Itaipu*		355	S. João do Oeste*						
	297	Itaipu*		297	Itaipu*		356	S. João do Oeste*						
	298	Itaipu*		298	Itaipu*		357	S. João do Oeste*						
	299	Itaipu*		299	Itaipu*		358	S. João do Oeste*						
	300	Itaipu*		300	Itaipu*		359	S. João do Oeste*						
	301	Itaipu*		301	Itaipu*		360	S. João do Oeste*						
	302	Itaipu*		302	Itaipu*		361	S. João do Oeste*						
303	Itaipu*	303	Itaipu*	362	S. João do Oeste*									
304	Itaipu*	304	Itaipu*	363	S. João do Oeste*									
305	Itaipu*	305	Itaipu*	364	S. João do Oeste*									
306	Itaipu*	306	Itaipu*	365	S. João do Oeste*									
307	Itaipu*	307	Itaipu*	366	S. João do Oeste*									
308	Itaipu*	308	Itaipu*	367	S. João do Oeste*									
309	Itaipu*	309	Itaipu*	368	S. João do Oeste*									
310	Itaipu*	310	Itaipu*	369	S. João do Oeste*									
311	Itaipu*	311	Itaipu*	370	S. João do Oeste*									
312	Itaipu*	312	Itaipu*	371	S. João do Oeste*									
313	Itaipu*	313	Itaipu*	372	S. João do Oeste*									

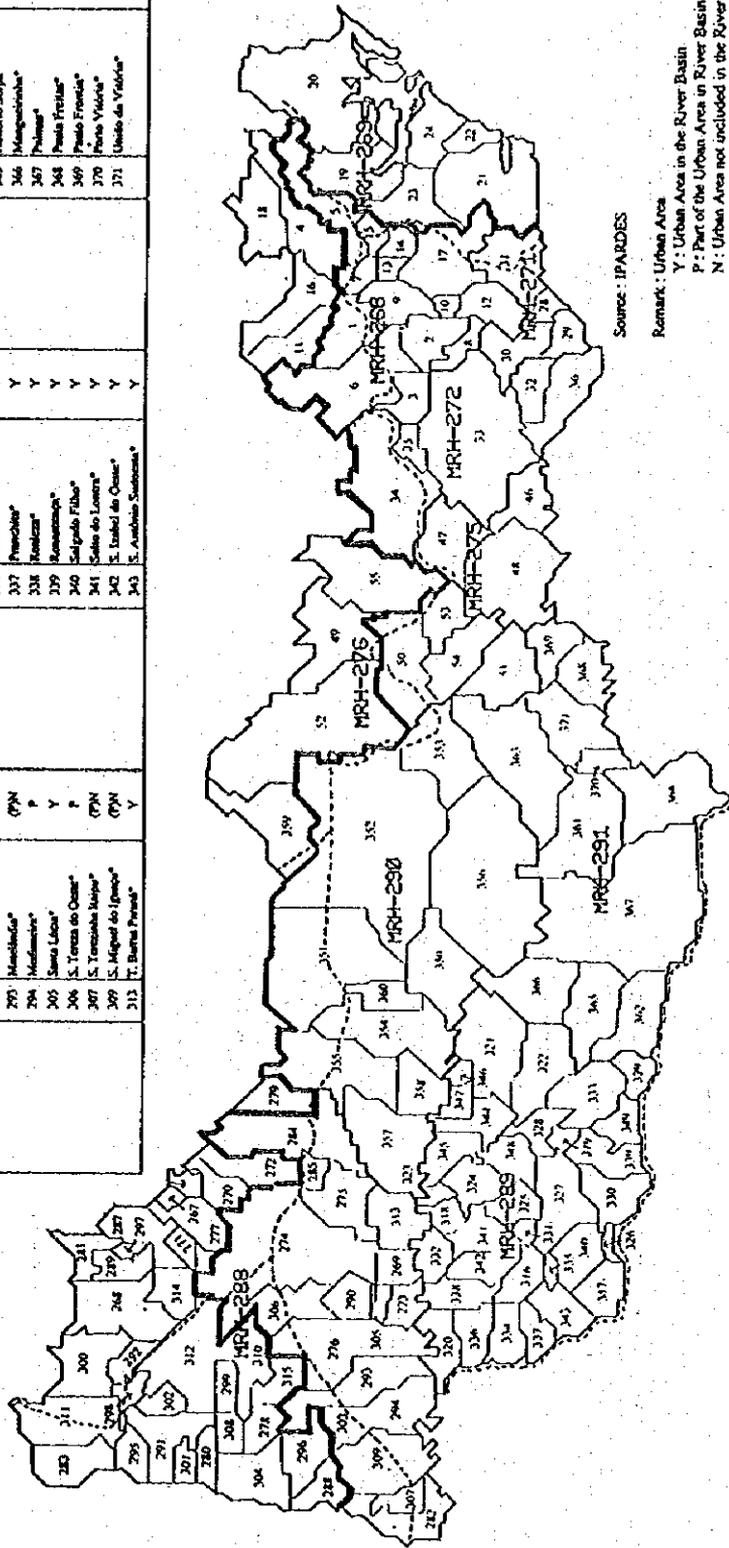


Figure - 2.1 Zoning of the Study/Iguaçu River Basin

Table -2.2 (1) Population per Municipality in 1970, 1980 and 1991/ Iguaçú River Basin

No. and Name of MRH	Population 1970			Population 1980			Population 1991		
	Municipality		Total	Municipality		Total	Municipality		Total
	Urban	Rural		Urban	Rural		Urban	Rural	
MRH 268									
Curitiba									
	TOTAL of MRH	656,469	164,764	821,233	1,325,275	115,351	1,440,626	1,877,232	2,000,805
1	Alm. Imandare	4,288	11,011	15,299	27,063	7,105	34,168	59,080	7,079
2	Araucária	5,473	11,644	17,117	27,128	7,671	34,799	54,262	7,627
3	Balsa Nova	1,234	3,470	4,704	1,262	4,026	5,288	2,430	5,085
5	Campina G. do Sul	319	7,572	7,891	3,783	6,015	9,798	12,722	6,621
6	Campo Largo	15,927	18,478	34,405	37,401	17,438	54,839	53,892	18,631
7	Colombo	1,092	18,166	19,258	54,979	7,902	62,881	110,273	7,494
8	Contenda	1,122	6,102	7,224	3,498	4,058	7,556	4,823	8,941
9	Curitiba	584,481	24,545	609,026	1,024,975	—	1,024,975	1,315,035	—
10	Fazenda Rio Grande	—	—	—	—	—	—	—	—
12	Mandirituba	1,364	9,672	11,036	7,216	8,236	15,452	26,237	12,099
13	Pinhais	—	—	—	—	—	—	—	—
14	Piraquara	12,113	9,140	21,253	60,927	9,713	70,640	91,438	15,444
15	Quatro Barras	1,105	2,961	4,066	3,493	2,217	5,710	8,132	1,875
17	S. José dos Pinhais	21,475	12,649	34,124	56,804	15,830	72,634	111,952	15,503
	Sub-Total of Municipalities of Basin	649,993	135,410	785,403	1,308,529	88,211	1,396,740	1,850,276	101,576
	Sub-Total of Municipalities not of Basin	6,476	29,354	35,830	16,746	27,140	43,886	26,956	21,997
MRH 271									
A. Rio Negro									
	TOTAL of MRH	2,529	26,959	29,488	3,327	28,246	31,573	5,958	38,463
28	Aguádos do Sul	767	4,665	5,432	653	4,547	5,200	779	5,297
29	Pin	131	5,224	5,355	262	5,728	5,990	1,432	6,313
30	Quitandinha	1,242	9,611	10,853	1,587	10,804	12,391	2,476	11,942
31	Tijucas do Sul	389	7,459	7,848	825	7,167	7,992	1,271	8,953
	Sub-Total of Municipalities of Basin	2,529	26,959	29,488	3,327	28,246	31,573	5,958	38,463
	Sub-Total of Municipalities not of Basin	0	0	0	0	0	0	0	0
MRH 272									
Campos da Lapa									
	TOTAL of MRH	34,492	42,417	77,909	44,843	42,862	87,705	58,986	45,345
32	Campo do Tenente	940	3,471	4,411	1,059	2,806	3,865	2,043	3,198
33	Lapa	10,566	21,556	32,122	14,374	20,647	35,021	19,472	20,678
34	Palmeira	0	0	0	0	0	0	0	0
35	Porto Amazonas	2,180	730	2,910	1,900	1,008	2,908	2,393	1,186
36	Rio Negro	12,677	5,759	18,436	15,838	5,838	21,676	20,200	6,115
	Sub-Total of Municipalities of Basin	26,363	31,316	57,879	33,171	30,299	63,470	44,108	31,177
	Sub-Total of Municipalities not of Basin	8,129	11,901	20,030	11,672	12,563	24,235	14,878	14,168
MRH 275									
São Mateus do Sul									
	TOTAL of MRH	7,492	33,616	41,108	13,682	30,394	44,576	19,375	33,816
46	Antônio Olinto	210	6,967	7,177	353	6,456	6,789	618	7,115
47	São João Triunfo	1,163	9,133	10,296	1,899	8,914	10,813	2,830	9,490
48	São Mateus do Sul	6,119	17,516	23,635	11,430	15,544	26,974	19,927	17,211
	Sub-Total of Municipalities of Basin	7,492	33,616	41,108	13,682	30,394	44,576	19,375	33,816
	Sub-Total of Municipalities not of Basin	0	0	0	0	0	0	0	0
MRH 276									
Col. Irati									
	TOTAL of MRH	36,598	98,159	134,757	49,976	98,491	148,467	69,230	102,442
50	Irati	0	0	0	0	0	0	0	0
51	Mallet	2,605	7,345	9,950	3,249	6,798	10,047	5,528	6,280
53	Rebouças	3,038	8,092	11,130	3,834	7,081	10,915	5,396	7,552
54	Rio Azul	1,776	7,905	9,681	2,519	8,170	10,689	3,206	9,200
	Sub-Total of Municipalities of Basin	7,419	23,342	30,761	9,602	22,049	31,651	14,130	23,032
	Sub-Total of Municipalities not of Basin	29,179	74,817	103,996	40,374	76,442	116,816	55,100	79,410

(To be continued)

(Continuation)

Table -2.2 (2) Population per Municipality in 1970, 1980 and 1991/ Iguaçu River Basin

No. and Name of MRE	No. and Name of Municipality	Population 1970			Population 1980			Population 1991		
		Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
		No.	No.	No.	No.	No.	No.	No.	No.	No.
MRH 288	TOTAL of MRH 288	149,516	602,916	752,432	484,504	476,205	960,709	728,448	288,033	1,016,481
Ext. Oeste Paranaense	B. Vista Aparecida	3,451	19,805	23,256	10,317	30,506	40,823	3,223	7,142	10,370
	C. Lebn. Marques	34,961	54,960	89,921	123,698	39,761	163,459	177,766	15,224	192,990
	Cascavel	2,191	23,535	25,726	8,625	27,706	36,331	3,712	6,109	9,821
	Catanduvas	4,183	19,036	23,219	11,754	13,690	25,444	5,831	4,755	10,586
	Cau Azul	20,147	13,819	33,966	101,330	34,991	136,321	186,385	3,738	190,123
	Foz do Iguaçu	3,552	25,097	28,649	7,567	26,901	34,468	8,623	17,389	26,012
	Guaraniçá	---	---	---	---	---	---	---	---	---
	Ibema	---	---	---	---	---	---	3,795	2,311	6,106
	Lindoeste	---	---	---	---	---	---	938	5,939	6,877
	Matelândia	2,651	21,910	24,561	10,016	23,410	33,426	10,385	6,944	17,329
	Medianeira	7,247	23,895	31,142	24,375	24,986	49,361	29,572	9,093	38,665
	Santa Lúcia	---	---	---	---	---	---	---	---	---
	S. Tereza do Oeste	---	---	---	---	---	---	3,307	2,811	6,118
	S. Terezinha Itaipu	---	---	---	---	---	---	11,655	2,494	14,149
	S. Miguel do Iguaçu	2,178	23,064	25,242	7,881	26,366	34,247	10,773	13,948	24,721
	T. Barras Paraná	---	---	---	---	---	---	4,104	10,878	14,982
	Sub-Total of Municipalities of Basin	80,561	225,121	305,682	305,563	288,317	593,880	464,629	111,693	576,322
MRH 289	TOTAL of MRH 289	68,955	377,795	446,750	178,941	227,888	406,829	260,591	169,198	429,789
Sudoeste Paranaense	Ampère	2,352	10,894	13,246	5,012	10,611	15,623	6,037	7,176	13,213
	Barracão	2,065	14,140	16,205	2,704	15,441	18,145	4,491	10,201	14,692
	B. Esper. Iguaçu	---	---	---	---	---	---	---	---	---
	B. Sucesso do Sul	---	---	---	---	---	---	---	---	---
	Capatema	3,733	17,984	21,717	7,708	18,075	25,783	7,936	11,432	19,368
	Chopinzinho	2,377	24,665	27,042	7,681	27,494	35,175	8,282	16,305	24,587
	Cruzeiro do Iguaçu	---	---	---	---	---	---	---	---	---
	Coronel Vivida	3,587	18,826	22,413	10,144	16,808	26,952	12,339	12,801	25,140
	Dois Vizinhos	4,149	33,004	37,153	12,286	30,186	42,472	22,202	18,065	40,267
	Encas Marques	1,175	12,707	13,882	1,721	12,556	14,277	2,115	10,281	12,396
	Flor da Serra do Sul	---	---	---	---	---	---	---	---	---
	Francisco Beltrão	13,413	23,394	36,807	28,289	20,475	48,762	45,622	15,650	61,272
	Itapejara do Oeste	2,130	7,945	10,075	3,066	7,037	10,103	3,909	5,136	9,045
	Mariópolis	1,850	5,016	6,866	2,314	3,889	6,203	2,855	3,425	6,280
	Marmelero	1,991	10,660	12,651	3,265	11,113	14,378	5,763	11,350	17,113
	N. Espera. Sudoeste	---	---	---	---	---	---	---	---	---
	N. Prata do Iguaçu	15,420	18,388	33,808	31,470	14,467	45,937	43,406	12,269	55,675
	Pato Branco	1,483	13,790	15,273	2,961	13,727	16,688	3,234	9,021	12,255
	Pérola do Oeste	---	---	---	---	---	---	---	---	---
	Pinhal São Bento	2,217	14,978	17,195	3,650	16,631	20,281	4,075	11,017	15,092
	Planalto	---	---	---	---	---	---	---	---	---
	Pranchita	3,313	13,424	16,737	8,744	12,951	21,695	2,609	5,995	8,604
	Realça	1,665	7,615	9,280	2,103	5,800	7,903	9,300	7,846	17,146
	Renasçença	---	---	---	---	---	---	2,161	5,385	7,546

(to be continued)

Table 2.2 (3) Population per Municipality in 1970, 1980 and 1991 / Iguacu River Basin (Continuation)

No. and Name of MRH	Municipality No. Name	Population 1970			Population 1980			Population 1991		
		Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
MRH 289 (cont.) Sudoeste Paranaense	340	Salgado Filho	885	11,420	12,305	1,583	13,934	2,062	11,767	13,829
	341	Saito do Lontra	2,254	29,194	31,448	7,083	27,166	4,624	9,673	14,297
	342	S. Izabel do Oeste	2,542	12,361	14,903	4,411	11,575	4,647	15,986	12,510
	343	S. Antônio Sudoeste	4,987	24,546	29,533	9,124	26,070	35,194	8,992	20,290
	344	São João	1,732	13,722	15,454	3,706	13,386	17,092	4,775	13,661
	345	São Jorge do Oeste	2,560	9,476	12,036	3,980	9,736	13,716	3,847	10,321
	346	Saudade do Iguacu	---	---	---	---	---	---	---	---
	347	Sulina	---	---	---	---	---	---	---	---
	348	Verê	1,082	11,627	12,709	1,805	10,468	12,273	951	5,222
	349	Vitorino	1,195	6,427	7,622	2,096	4,729	6,825	2,657	7,555
	Sub-total of Municipalities of Basin	80,157	366,203	446,360	166,906	354,343	521,249	225,666	252,460	478,126
	Sub-total of Municipalities not of Basin	0	0	0	0	0	0	0	0	0
	TOTAL of MRH	54,427	135,403	189,830	138,931	157,905	296,836	176,072	157,602	333,674
MRH 290 Campos de Guarapuava	350	Caridói	---	---	---	---	---	---	---	---
	351	Cantagalo	---	---	---	---	---	---	---	---
	352	Guarapuava	43,264	67,639	110,903	89,951	68,636	158,587	116,210	43,424
	353	Inácio Martins	979	6,668	7,647	2,063	8,396	10,459	2,513	13,776
	354	Laranjeiras do Sul	6,394	33,257	39,651	21,242	41,591	62,833	21,994	32,108
	355	Nova Laranjeiras	---	---	---	---	---	---	---	---
	356	Pinhão	3,192	17,164	20,356	12,790	20,665	33,455	10,666	24,344
	357	Quedas do Iguacu	598	10,675	11,273	12,885	18,617	31,502	16,155	15,354
	358	Rio Bomito Iguacu	---	---	---	---	---	---	---	---
	360	Virmond	---	---	---	---	---	---	---	---
	Sub-total of Municipalities of Basin	54,427	135,403	189,830	138,931	157,905	296,836	173,228	146,300	
	Sub-total of Municipalities not of Basin	0	0	0	0	0	0	2,844	11,302	
	TOTAL of MRH	47,356	79,876	127,212	77,837	79,866	157,702	102,446	76,187	
MRH 291 Médio Iguacu	361	Bituruna	1,234	7,670	9,104	3,448	8,267	11,715	7,277	12,852
	362	Clevelândia	8,212	5,424	13,636	11,949	4,839	16,788	13,347	4,710
	363	Cruz Machado	653	12,907	13,560	1,782	13,359	15,141	2,473	14,095
	364	General Carneiro	807	6,003	6,810	2,975	6,000	8,975	6,078	5,209
	365	Honório Serpa	---	---	---	---	---	---	---	---
	366	Mangueirinha	1,188	14,242	15,430	2,286	18,871	21,157	4,982	20,622
	367	Palmas	10,001	15,810	25,811	16,732	14,144	30,876	24,890	10,372
	368	Paula Freitas	588	4,107	4,695	646	3,875	4,521	1,473	3,192
	369	Paulo Frontin	790	4,522	5,312	994	4,378	5,372	1,573	4,985
	370	Porto Vitória	683	2,421	3,104	1,509	2,018	3,527	1,854	1,918
371	União da Vitória	22,980	6,770	29,750	35,516	4,115	39,631	40,201	3,807	
	Sub-total of Municipalities of Basin	47,356	79,876	127,212	77,837	79,866	157,702	102,446	76,187	
	Sub-total of Municipalities not of Basin	0	0	0	0	0	0	0	0	
	TOTAL OF MUNICIPALITIES OF THE BASIN	956,277	1,057,446	2,013,725	2,057,548	1,040,130	3,097,678	2,899,816	808,746	3,708,562

Source : Census of 1970, 1980 and 1991 / IBGE, IPARDES
 Remark : Municipalities without number of population had not been created until the respective year
 : Figure of Itati/MRH 276 and Palmeira/MRH 272 are listed in Tibagi River Basin

Table - 2.3 (2) GRDP per Municipality in 1981, 1983, 1985, 1987, 1989 and 1991 / Iguaquê River Basin

(Continuation)

No. and Name of Municipality	1981					1983					1985					1987					1989					1991				
	%	US\$ million																												
MRH 288	100.00	1,875.90	100.00	1,940.90	100.00	2,153.50	100.00	2,652.70	100.00	2,652.70	100.00	3,329.90	100.00	3,329.90	100.00	4,153.64	100.00	4,153.64	100.00	4,153.64	100.00	4,153.64	100.00	4,153.64	100.00	4,153.64	100.00	4,153.64	100.00	4,153.64
Ext. Oeste Paranaense	0.00	0.00	0.31	6.00	0.25	6.00	0.91	24.13	0.14	24.13	0.14	4.81	0.01	4.81	0.01	6.07	0.01	6.07	0.01	6.07	0.01	6.07	0.01	6.07	0.01	6.07	0.01	6.07	0.01	6.07
269 B. Vista Aparecida	1.75	32.79	0.87	16.81	0.62	14.62	0.45	12.02	0.34	12.02	0.34	11.26	0.03	11.26	0.03	14.56	0.03	14.56	0.03	14.56	0.03	14.56	0.03	14.56	0.03	14.56	0.03	14.56	0.03	14.56
273 C. León, Marques	20.51	384.41	17.45	338.62	17.43	410.36	19.74	523.97	15.45	523.97	15.45	514.56	1.82	514.56	1.82	539.32	1.82	539.32	1.82	539.32	1.82	539.32	1.82	539.32	1.82	539.32	1.82	539.32	1.82	539.32
274 Casnevel	2.21	41.46	1.03	19.91	1.20	28.22	1.07	28.32	1.01	28.32	1.01	33.51	0.05	33.51	0.05	43.32	0.05	43.32	0.05	43.32	0.05	43.32	0.05	43.32	0.05	43.32	0.05	43.32	0.05	43.32
275 Calandras	2.13	39.83	2.22	43.05	2.03	47.72	2.28	60.40	1.12	60.40	1.12	37.17	0.04	37.17	0.04	43.32	0.04	43.32	0.04	43.32	0.04	43.32	0.04	43.32	0.04	43.32	0.04	43.32	0.04	43.32
276 Céu Azul	7.47	140.00	5.90	114.57	5.54	130.44	7.01	186.12	20.29	186.12	20.29	678.81	8.62	678.81	8.62	1,175.84	8.62	1,175.84	8.62	1,175.84	8.62	1,175.84	8.62	1,175.84	8.62	1,175.84	8.62	1,175.84	8.62	1,175.84
282 Foz do Iguaquê	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.90	0.00	20.90	0.00	20.90	0.00	20.90	0.00	20.90	0.00	20.90	0.00	20.90		
284 Guaraniçu	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
285 Itema	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
290 Lindoeste	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
293 Matelândia	2.65	49.74	2.41	46.82	2.13	50.20	1.24	32.89	0.99	32.89	0.99	33.07	0.12	33.07	0.12	30.37	0.12	30.37	0.12	30.37	0.12	30.37	0.12	30.37	0.12	30.37	0.12	30.37	0.12	30.37
294 Mocimiza	4.72	88.36	4.02	78.10	3.54	83.32	2.80	74.39	3.02	74.39	3.02	100.71	0.33	100.71	0.33	84.48	0.33	84.48	0.33	84.48	0.33	84.48	0.33	84.48	0.33	84.48	0.33	84.48	0.33	84.48
305 Santa Lúcia	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
306 S. Tereza do Oeste	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
307 S. Terézinha Itaipu	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
309 S. Miguel do Iguaquê	3.52	62.28	2.52	48.97	3.17	74.59	2.60	68.94	4.53	68.94	4.53	150.95	0.19	150.95	0.19	48.49	0.19	48.49	0.19	48.49	0.19	48.49	0.19	48.49	0.19	48.49	0.19	48.49	0.19	48.49
313 T. Barras Paran	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Subtotal of Municipalities of Basin	44.77	838.88	39.48	766.19	37.30	878.12	39.82	1,056.80	48.99	1,056.80	48.99	1,631.34	11.61	1,631.34	11.61	2,928.90	11.61	2,928.90	11.61	2,928.90	11.61	2,928.90	11.61	2,928.90	11.61	2,928.90	11.61	2,928.90	11.61	2,928.90
Subtotal of Municipalities not of Basin	55.23	1,035.02	60.52	1,174.71	62.70	1,275.38	60.18	1,597.40	51.01	1,597.40	51.01	1,698.56	88.39	1,698.56	88.39	1,224.74	88.39	1,224.74	88.39	1,224.74	88.39	1,224.74	88.39	1,224.74	88.39	1,224.74	88.39	1,224.74	88.39	1,224.74
MRH 289	100.00	656.90	100.00	593.90	100.00	783.50	100.00	792.90	100.00	792.90	100.00	866.10	100.00	866.10	100.00	946.92	100.00	946.92	100.00	946.92	100.00	946.92	100.00	946.92	100.00	946.92	100.00	946.92	100.00	946.92
Sudoeste Paranaense	2.09	13.70	2.34	13.87	2.28	17.90	1.59	12.62	1.60	12.62	1.60	13.82	0.06	13.82	0.06	15.86	0.06	15.86	0.06	15.86	0.06	15.86	0.06	15.86	0.06	15.86	0.06	15.86	0.06	15.86
316 Ampere	1.77	11.59	0.94	5.60	0.67	5.26	0.62	4.89	0.93	4.89	0.93	8.01	0.01	8.01	0.01	4.79	0.01	4.79	0.01	4.79	0.01	4.79	0.01	4.79	0.01	4.79	0.01	4.79	0.01	4.79
318 B. Esperança Iguaquê	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
319 B. Sucesso do Sul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
320 Capinema	4.93	32.38	5.24	31.11	4.29	33.74	2.86	22.65	2.51	22.65	2.51	21.77	0.07	21.77	0.07	19.29	0.07	19.29	0.07	19.29	0.07	19.29	0.07	19.29	0.07	19.29	0.07	19.29	0.07	19.29
321 Chopuzinho	4.92	32.31	4.82	28.62	4.97	39.01	4.91	38.90	13.44	38.90	13.44	116.37	0.25	116.37	0.25	63.24	0.25	63.24	0.25	63.24	0.25	63.24	0.25	63.24	0.25	63.24	0.25	63.24	0.25	63.24
322 Coronel Vieira	4.81	31.39	5.20	30.86	4.16	32.68	4.75	37.63	4.20	37.63	4.20	36.40	0.11	36.40	0.11	27.99	0.11	27.99	0.11	27.99	0.11	27.99	0.11	27.99	0.11	27.99	0.11	27.99	0.11	27.99
323 Cruzeiro do Iguaquê	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
324 Dois Vizinhos	8.94	58.72	10.53	62.56	12.82	100.73	14.71	116.63	8.10	116.63	8.10	70.15	0.06	70.15	0.06	129.97	0.06	129.97	0.06	129.97	0.06	129.97	0.06	129.97	0.06	129.97	0.06	129.97	0.06	129.97
325 Edeia Marques	1.53	10.05	1.19	7.06	1.57	12.30	1.52	12.02	1.04	12.02	1.04	9.02	0.03	9.02	0.03	8.81	0.03	8.81	0.03	8.81	0.03	8.81	0.03	8.81	0.03	8.81	0.03	8.81	0.03	8.81
326 Flor da Serra do Sul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
327 Francisco Beltrão	15.86	104.14	17.17	101.99	18.41	144.60	20.41	161.81	19.01	161.81	19.01	164.68	0.50	164.68	0.50	128.63	0.50	128.63	0.50	128.63	0.50	128.63	0.50	128.63	0.50	128.63	0.50	128.63	0.50	128.63
328 Itaipava do Oeste	2.30	15.11	2.92	17.33	2.41	18.96	1.85	14.67	1.44	14.67	1.44	12.44	0.05	12.44	0.05	13.15	0.05	13.15	0.05	13.15	0.05	13.15	0.05	13.15	0.05	13.15	0.05	13.15	0.05	13.15
329 Marópoli	2.22	14.57	2.08	12.34	1.64	12.88	1.62	12.88	1.56	12.88	1.56	13.48	0.04	13.48	0.04	10.80	0.04	10.80	0.04	10.80	0.04	10.80	0.04	10.80	0.04	10.80	0.04	10.80	0.04	10.80
330 Marmeleiro	2.41	15.80	2.00	11.85	2.39	18.78	2.26	17.94	1.87	17.94																				

Table - 2.3 (3) GRDP per Municipality in 1981, 1983, 1985, 1987, 1989 and 1991 / Iguazu River Basin

(Continuation)

No. and Name of MRH	YEAR												
	1981		1983		1985		1987		1989		1991		
Municipality No.	Name	%	US\$ million	% / MRH	US\$ million								
MRH 289 (cont.)													
Stad. Paraense													
340	Salgado Filho	1.09	7.15	0.87	5.19	0.82	6.47	0.73	5.78	0.61	5.25	0.02061	5.20
341	Salto do Lontra	3.98	26.10	2.79	16.60	2.05	16.11	1.78	14.10	1.60	13.84	0.04248	1.35
342	S. Izabel do Oeste	2.03	13.34	2.17	12.86	2.44	19.19	1.67	13.24	1.78	15.44	0.05622	1.78
343	S. Antônio Sudoeste	4.32	28.38	2.43	14.42	1.98	15.57	1.83	14.51	1.69	14.42	0.04472	1.42
344	São João	3.13	20.56	3.09	18.35	2.67	21.00	3.07	24.32	3.13	27.09	0.09876	3.13
345	São Jorge do Oeste	3.27	21.46	2.53	13.85	2.06	16.22	1.96	15.57	5.75	49.77	0.14896	4.73
346	Saúde do Iguazu	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02532	0.80
347	Sulzina	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.04	8.98	0.02814	0.89
348	Ver	1.77	11.62	1.96	11.65	2.06	16.16	1.77	14.01	1.65	14.27	0.04416	1.40
349	Vitório	1.62	10.62	1.73	10.27	1.70	13.36	1.99	15.79	1.28	11.09	0.03593	1.14
Subtotal of Municipalities of Basin		100.00	656.50	100.00	593.90	100.00	785.50	100.00	792.90	100.00	866.10	3.15132	100.00
Subtotal of Municipalities not of Basin		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00000	0.00
MRH 290		100.00	423.10	100.00	396.10	100.00	470.50	100.00	671.10	100.00	909.30	3.26796	100.00
Campos de Guarapuava													
TOTAL of MRH													
350	Camdon	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27647	8.46
351	Canagó	0.00	0.00	1.39	5.49	3.74	17.61	2.21	14.85	1.78	16.16	0.05682	1.74
352	Guarapuava	71.30	301.69	67.28	266.51	67.75	318.77	70.67	474.27	59.05	537.05	1.62612	49.76
353	Indaio Martins	3.02	12.77	2.12	8.40	2.07	9.75	1.61	10.82	0.97	8.86	0.03566	1.09
354	Laranjeiras do Sul	9.95	42.09	9.41	37.27	8.59	40.44	6.82	45.74	15.87	144.33	0.22609	6.92
355	Nova Laranjeiras	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03091	0.95
356	Pinhão	8.09	34.21	7.76	30.73	10.07	47.40	9.59	64.37	7.47	67.92	0.33101	10.13
357	Quedas do Iguazu	7.64	32.34	10.27	40.69	8.55	40.22	6.86	46.03	12.48	113.50	0.37014	11.33
358	Rio Bonito do Iguazu	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19229	5.88
359	Virmond	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01597	4.03
Subtotal of Municipalities of Basin		100.00	423.10	96.84	383.59	97.04	456.58	95.55	641.23	95.84	871.67	2.82819	86.54
Subtotal of Municipalities not of Basin		0.00	0.00	3.97	11.77	2.85	13.42	4.35	29.22	4.09	37.17	0.10648	3.26
MRH 291		100.00	287.50	100.00	227.10	100.00	288.90	100.00	380.60	100.00	473.00	1.77866	100.00
Médio Iguazu													
361	Baturama	6.09	17.51	5.07	11.52	4.77	13.78	4.36	18.51	11.05	32.27	0.26764	15.05
362	Clevelândia	14.38	41.35	19.94	45.28	20.79	60.07	12.69	48.31	11.87	56.13	0.22545	12.68
363	Cruz Machado	2.53	6.69	2.11	4.79	2.98	8.61	2.61	9.92	8.36	39.36	0.22866	12.86
364	General Carneiro	4.14	11.90	5.60	12.72	7.15	20.66	6.97	26.54	6.06	28.66	0.08164	4.59
365	Hombro Serra	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03617	2.03
366	Mangueirinha	14.30	41.11	13.78	31.29	15.15	43.77	14.78	56.25	8.96	42.36	0.11415	6.42
367	Palmas	22.94	65.94	17.62	40.03	15.56	44.94	19.61	74.04	15.28	72.26	0.20869	11.73
368	Paula Freitas	1.05	3.03	1.19	2.70	0.96	2.79	1.47	5.59	0.93	4.41	0.01483	0.83
369	Paulo Frontin	1.50	3.74	1.59	3.61	1.76	5.09	1.55	5.91	1.40	6.60	0.02272	1.28
370	Porto Vitória	1.51	4.35	1.46	3.32	1.25	3.62	1.41	5.37	1.76	8.94	0.04594	2.41
371	União da Vitória	31.95	91.87	31.63	71.84	29.62	85.56	34.04	129.56	34.34	162.41	0.53577	30.12
Subtotal of Municipalities of Basin		100.00	287.50	100.00	227.10	100.00	288.90	100.00	380.60	100.00	473.00	1.77866	100.00
Subtotal of Municipalities not of Basin		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL OF THE MUNICIPALITIES OF THE BASIN		100.00	7,700.38	100.00	7,569.69	100.00	8,394.82	100.00	11,276.01	100.00	13,476.38	1.77866	100.00

Source: Estatística Econômica Financeira (Finance Economic Statistics) 74/85, 86/87, 88/89 - SEFA; Fundo de Participação dos Municípios - Índices Provisórios - 95 (Municipalities' Participation Fund - Preliminary Indexes - 95) - SEFA
 Remark: Figures of Inst/MRH 276 and Palmeira/MRH 272 are listed in Thisag River Basin
 In the figures of 1989 and 1991 was included the value of contribution of Hydroelectric Power Stations

Table - 2.4 (1) GRDP by Secondary Sector per Municipality in 1981, 1983, 1985, 1987, 1989 and 1991/Iguacu River Basin

MRH	No. and Name of Municipality	YEAR											
		1981		1983		1985		1987		1989		1991	
	No.	%	US\$ million										
MRH 268	TOTAL of MRH	100.00	2,806.20	100.00	2,603.60	100.00	2,469.00	100.00	3,087.90	100.00	3,351.80	100.00	3,572.10
	Curitiba	0.35	9.87	0.32	8.45	0.41	10.16	0.49	15.15	0.63	21.27	0.43	15.33
	1 Alm. Tamandaré	47.51	1,333.16	43.58	1,134.62	34.05	840.77	25.59	790.14	21.70	727.47	22.09	789.20
	2 Araucária	0.79	22.30	0.91	23.63	0.76	18.64	0.63	19.53	0.85	23.59	1.26	45.08
	3 Balsa Nova	0.09	2.52	0.11	2.52	0.11	2.52	0.11	2.52	0.11	2.52	0.11	2.52
	5 Campina G. do Sul	3.15	88.36	2.64	68.72	3.49	86.23	4.30	132.85	5.19	174.08	3.35	119.51
	6 Campo Largo	1.25	35.15	1.08	28.05	1.22	30.20	1.72	53.21	1.73	57.88	1.69	60.25
	7 Colombo	0.00	0.07	0.01	0.17	0.01	0.26	0.01	0.38	0.01	0.37	0.01	0.52
	8 Contenda	39.70	1,114.04	44.47	1,157.90	51.45	1,270.18	56.74	1,751.95	57.63	1,931.55	57.77	2,063.46
	9 Curitiba	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.66
	10 Fazenda Rio Grande	0.04	1.02	0.03	0.78	0.03	0.73	0.06	1.82	0.11	3.73	0.03	1.04
	12 Mandirituba	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.31
	13 Pinhais	0.53	14.82	0.68	17.61	0.84	20.68	1.49	46.14	1.91	63.86	0.12	4.31
	14 Piraquara	0.74	20.84	0.61	15.98	0.63	15.60	0.53	16.50	0.55	18.30	0.64	22.71
	15 Quatro Barras	2.60	72.88	2.69	69.96	3.42	84.42	5.23	161.52	6.92	231.83	6.57	224.62
	17 São José dos Pinhais	96.75	2,715.03	97.11	2,528.12	96.42	2,380.67	97.06	2,997.02	97.60	3,271.34	96.75	3,455.95
	Subtotal of Municipalities of Basin	3.25	91.17	2.89	75.48	3.38	88.33	2.94	90.88	2.40	80.46	3.25	116.15
	Subtotal of Municipalities not of Basin	100.00	2,10	100.00	2,10	100.00	2,10	100.00	3.90	100.00	3.40	100.00	5.46
MRH 271	TOTAL of MRH	3.82	108	1.65	4.11	0.34	0.91	1.09	0.04	0.11	0.14	0.12	0.20
	Alto Rio Negro	71.61	1,50	72.00	1.51	1.52	59.83	2.34	72.47	2.46	38.34	2.09	2.09
	28 Agudos do Sul	1.20	0.03	1.93	0.04	0.04	0.04	1.12	0.04	0.24	0.24	0.31	0.31
	30 Quindim	23.37	0.49	24.52	0.51	25.16	0.54	1.48	1.48	1.48	1.48	1.48	1.48
	31 Tijucas do Sul	100.00	2.10	100.00	2.10	100.00	2.10	100.00	3.90	100.00	3.40	100.00	5.46
	Subtotal of Municipalities of Basin	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Subtotal of Municipalities not of Basin	100.00	60.10	100.00	55.20	100.00	60.50	100.00	57.60	100.00	80.90	100.00	85.28
MRH 272	TOTAL of MRH	0.37	0.22	0.44	0.24	0.02	0.01	0.01	0.01	0.03	0.03	0.12	0.70
	Campos da Lapa	11.58	6.96	15.56	8.59	24.22	14.64	7.31	4.21	6.38	5.16	10.11	8.62
	32 Campo de Tenente	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	34 Palmeira	0.07	0.04	0.32	0.18	0.57	0.35	0.85	0.49	1.13	0.92	0.76	0.64
	35 Porto Amazonas	73.92	44.43	72.81	40.19	61.11	36.98	70.50	40.61	72.93	59.00	68.13	58.10
	36 Rio Negro	85.94	51.65	89.13	49.20	85.92	51.98	78.67	45.31	80.48	65.11	79.11	67.47
	Subtotal of Municipalities of Basin	14.06	8.45	10.87	6.00	14.08	8.52	21.33	12.29	19.52	15.79	20.89	17.81
	Subtotal of Municipalities not of Basin	100.00	6.10	100.00	2.10	100.00	3.40	100.00	9.40	100.00	4.80	100.00	17.08
MRH 275	TOTAL of MRH	4.35	0.27	5.30	0.11	3.34	0.28	5.44	0.51	7.32	0.35	2.03	0.35
	S. Mateus do Sul	13.79	0.84	27.88	0.59	6.94	0.58	4.53	0.43	10.67	0.51	2.33	0.40
	46 Antônio Olinto	81.36	4.99	66.82	1.40	89.72	7.54	90.02	8.46	82.01	3.94	95.64	16.34
	47 São João do Trunfo	100.00	6.10	100.00	2.10	100.00	3.40	100.00	9.40	100.00	4.80	100.00	17.08
	48 São Mateus do Sul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Subtotal of Municipalities of Basin	100.00	24.70	100.00	23.80	100.00	26.90	100.00	32.60	100.00	39.20	100.00	41.08
	Subtotal of Municipalities not of Basin	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MRH 276	TOTAL of MRH	6.46	1.60	14.43	3.44	13.37	3.60	35.24	11.49	34.17	13.40	12.74	5.23
	Col. Irati	2.73	0.68	1.86	0.44	2.76	0.74	4.40	1.43	6.46	2.53	2.63	1.08
	51 Mallet	4.89	1.21	3.07	0.73	1.32	0.36	5.20	1.70	4.17	1.63	3.56	1.46
	53 Rebouças	14.08	3.49	19.36	4.61	17.45	4.70	44.84	14.62	44.80	17.56	18.93	7.77
	54 Rio Azul	85.92	21.21	80.64	19.19	82.55	22.20	55.16	17.98	55.20	21.64	81.07	33.31
	Subtotal of Municipalities of Basin	14.08	3.49	19.36	4.61	17.45	4.70	44.84	14.62	44.80	17.56	18.93	7.77
	Subtotal of Municipalities not of Basin	85.92	21.21	80.64	19.19	82.55	22.20	55.16	17.98	55.20	21.64	81.07	33.31

(To be continued)

Table - 2.4 (2) GRDP by Secondary Sector per Municipality in 1981, 1983, 1985, 1987, 1989 and 1991/Iguaçu River Basin.

(Continuation)

No. and Name of MRH	No. of MRH Municipality	YEAR											
		1981		1983		1985		1987		1989		1991	
		%	US\$ million										
MRH 288		100.00	162.90	100.00	213.20	100.00	230.20	100.00	259.30	100.00	606.90	100.00	1,408.23
E. Oeste Parana.													
	269	0.00	0.00	0.00	0.12	0.02	0.05	0.01	0.04	0.01	0.05	0.01	0.14
	273	0.30	0.48	0.06	0.13	0.04	0.10	0.02	0.06	0.03	0.21	0.03	0.38
	274	25.76	41.95	14.80	31.52	22.12	50.90	22.17	57.45	9.26	56.19	4.03	56.81
	275	2.93	4.77	1.61	3.42	2.41	5.55	1.39	3.60	1.06	6.40	0.02	0.35
	276	3.09	5.03	8.11	17.27	6.92	15.92	7.50	19.45	1.05	9.31	1.05	14.82
	282	5.23	8.53	3.75	8.00	4.50	10.35	5.88	15.25	32.85	199.39	80.84	1,138.44
	284	0.72	1.18	0.36	0.77	0.37	0.86	0.41	1.07	0.04	0.27	0.02	0.35
	285	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.80
	290	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
	293	1.01	1.64	0.56	1.20	0.50	1.14	0.39	1.00	0.26	1.61	0.17	2.43
	294	4.80	7.82	3.66	7.79	4.06	9.35	4.13	10.71	3.23	19.58	0.91	12.77
	305	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
	306	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
	307	0.00	0.00	0.00	0.12	0.25	0.88	0.80	2.08	0.53	3.20	0.05	0.64
	309	2.04	3.32	1.02	2.18	1.09	2.51	1.08	2.79	8.36	50.72	0.18	2.51
	313	0.00	0.00	0.07	0.16	0.02	0.05	0.20	0.53	0.01	0.09	0.02	0.25
	Subtotal of Municipalities of Basin	45.38	74.72	34.18	72.81	42.93	98.80	43.98	114.01	57.17	346.97	87.57	1,233.20
MRH 289		54.12	88.18	65.82	140.39	57.07	131.40	56.02	145.29	42.83	259.93	12.43	175.05
Sud. Paranaense		100.00	58.40	100.00	55.30	100	105.60	100.00	109.60	100.00	139.20	100.00	151.25
	TOTAL of MRH	0.69	0.40	0.49	0.27	0.3	0.32	0.35	0.49	0.74	1.03	1.88	2.34
	316	0.86	0.50	0.38	0.21	0.14	0.14	0.12	0.13	0.05	0.08	0.16	0.24
	317	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
	318	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
	319	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61
	320	1.52	0.89	2.66	1.47	1.46	1.54	0.08	0.09	0.62	0.86	0.40	0.61
	321	2.28	1.33	1.37	0.76	0.54	0.57	1.22	1.34	21.53	29.97	1.52	2.30
	322	10.08	5.89	7.06	3.91	3.47	3.67	4.31	4.72	2.33	3.24	2.82	4.26
	323	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.93
	324	20.44	11.94	29.01	16.05	31.72	33.49	32.68	35.82	7.81	10.88	34.01	51.44
	325	0.08	0.05	0.08	0.04	0.02	0.03	0.01	0.01	0.02	0.03	0.06	0.09
	326	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
	327	27.93	16.30	35.08	19.40	48.53	51.22	44.78	49.08	33.18	46.18	22.78	34.45
	328	0.29	0.17	0.70	0.38	0.12	0.13	0.38	0.63	0.74	1.02	0.70	1.05
	329	1.33	0.78	1.00	0.55	0.8	0.83	0.86	0.94	0.69	0.96	0.55	0.83
	330	1.86	1.08	1.48	0.82	1.09	1.15	1.34	1.46	1.04	1.44	1.12	1.70
	331	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
	332	0.00	0.00	0.16	0.09	0.04	0.05	0.09	0.09	0.13	0.18	0.30	0.46
	333	18.75	10.95	9.98	5.52	6.96	7.35	9.14	10.01	8.34	11.62	10.89	16.46
	334	1.05	0.62	0.60	0.33	0.28	0.3	0.20	0.22	0.46	0.64	0.16	0.24
	335	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	336	0.46	0.27	0.27	0.15	0.07	0.11	0.12	0.12	0.23	0.23	0.17	0.26
	337	0.00	0.00	0.93	0.51	0.34	0.36	0.32	0.35	0.00	0.00	0.41	0.62
	338	4.33	2.53	4.08	2.26	1.53	1.62	1.58	1.75	1.54	2.14	0.98	1.48
	339	1.59	0.93	1.16	0.64	0.78	0.82	0.58	0.63	0.54	0.75	1.01	1.52

(To be continued)

Table - 2.4 (3) GRDP by Secondary Sector per Municipality in 1981, 1983, 1985, 1987, 1989 and 1991/Iguaçu River Basin

(Continuation)

No. and Name of MRH	No. of MRH Municipality	YEAR											
		1981		1983		1985		1987		1989		1991	
		%	US\$ million										
MRH 239 (cont.) Sud. Paranaense	340 Saigado Filho	0.39	0.23	0.29	0.16	0.15	0.16	0.09	0.10	0.06	0.08	0.12	0.18
	341 Salto de Lontra	0.40	0.23	0.08	0.04	0.04	0.05	0.09	0.10	0.08	0.11	0.16	0.24
	342 S. Izabel do Oeste	0.22	0.13	0.08	0.04	0.05	0.05	0.07	0.08	0.09	0.12	0.13	0.20
	343 S. Antônio Sudoeste	2.01	1.17	0.36	0.31	0.12	0.13	0.13	0.14	0.27	0.37	0.71	1.08
	344 São João	0.54	0.32	0.22	0.12	0.21	0.21	0.19	0.20	3.09	4.30	2.36	3.58
	345 São Jorge do Oeste	0.67	0.39	0.61	0.34	0.29	0.31	0.25	0.27	13.80	19.20	10.17	15.38
	346 Saudade do Iguaçu	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54
	347 Sulina	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.08	2.90	1.59	2.40
	348 Ver	0.45	0.26	0.35	0.20	0.35	0.37	0.33	0.36	0.22	0.31	0.20	0.44
	349 Vitorino	1.78	1.04	1.32	0.73	0.6	0.63	0.43	0.48	0.40	0.56	0.29	0.44
Subtotal of Municipalities of Basin	100.00	58.40	100.00	55.30	100.00	105.60	100.00	109.60	100.00	139.20	100.00	151.25	
Subtotal of Municipalities not of Basin	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
MRH 290	TOTAL of MRH	100.00	83.60	100.00	93.90	100	106.2	100.00	115.20	100.00	259.10	100.00	192.74
C. Guarapuava	350 Canoê	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.43
	351 Cantagalo	0.00	0.00	1.58	1.49	2.16	2.29	1.20	1.38	0.75	1.93	1.10	2.11
	352 Guarapuava	65.40	54.67	62.01	58.23	70.97	75.37	66.64	76.77	51.67	133.89	53.93	103.95
	353 Inácio Martins	3.64	3.05	1.88	1.76	2.13	2.27	2.44	2.81	1.29	3.35	1.38	2.66
	354 Laranjeiras do Sul	9.29	7.76	6.29	5.90	3.40	3.61	2.58	2.98	17.93	46.47	1.70	3.27
	355 Nova Laranjeiras	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
	356 Pinhão	7.19	6.01	7.89	7.41	6.78	7.20	7.05	8.12	6.07	15.72	12.24	23.59
	357 Quedas do Iguaçu	14.48	12.11	13.96	13.11	9.04	9.60	8.41	9.69	15.80	40.95	19.91	38.38
	358 Rio Bonito Iguaçu	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.76	3.39
	360 Virmond	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
Subtotal of Municipalities of Basin	100.00	83.60	93.61	87.90	94.48	100.34	83.32	101.75	93.52	242.31	93.35	179.95	
Subtotal of Municipalities not of Basin	0.00	0.00	6.39	6.00	5.32	5.86	11.68	13.45	6.88	16.79	6.83	12.81	
MRH 291	TOTAL of MRH	100.00	94.70	100.00	76.90	100	96.00	101.30	101.30	100.00	143.00	100.00	168.28
Médio Iguaçu	361 Benaruna	8.10	7.67	6.43	4.94	5.70	5.47	5.42	14.69	21.01	19.99	33.64	
	362 Clevelândia	19.19	18.17	28.29	21.76	28.48	27.36	16.17	16.38	12.35	17.67	14.72	24.77
	363 Cruz Machado	0.90	0.85	0.69	0.53	1.16	1.11	1.62	1.64	11.07	15.83	17.26	29.04
	364 General Carneiro	4.93	4.67	6.78	5.21	8.86	8.67	8.78	8.78	6.71	9.59	4.30	7.23
	365 Honório Serpa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.30
	366 Mangueirinha	7.76	7.35	5.43	4.18	5.26	5.05	4.17	4.22	2.90	4.14	1.06	1.78
	367 Palmas	14.23	13.47	11.61	8.93	11.11	10.66	16.13	16.34	10.60	15.16	6.61	11.13
	368 Paula Freitas	0.19	0.18	0.07	0.05	0.00	0.00	0.14	0.15	0.09	0.12	0.07	0.12
	369 Paulo Frontin	0.33	0.31	0.25	0.19	0.15	0.14	0.32	0.33	0.33	0.47	0.21	0.35
	370 Porto Vitória	1.97	1.87	1.85	1.43	1.67	1.60	1.99	2.01	2.55	3.65	3.13	5.26
371 União da Vitória	42.40	40.16	38.60	29.68	37.61	36.11	45.45	46.04	38.71	55.36	32.47	54.64	
Subtotal of Municipalities of Basin	100.00	94.70	100.00	76.90	100.00	96.00	101.30	101.30	100.00	143.00	100.00	168.28	
Subtotal of Municipalities not of Basin	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
TOTAL OF MUNICIPALITIES OF THE BASIN			3,181.20		2,879.04		2,848.59		3,496.91		4,233.69		5,286.38

Source: Estatística Econômica Financeira (Finance Economic Statistics) 74/85, 86/87, 88/89 and Fundo de Participação dos Municípios/Indices Provisórios-95 (Municipalities/Participatio Fund-Preliminary Indexes 95) - SEFA

Remark: Figures of Itaipu/MRH 276 and Palmeria/MRH 272 are listed in Itaipu River Basin

In the figures of 1989 and 1991 were included the value added of the contribution of Hydroelectric Power Stations

2.3 Future Socio-Economic Structure

2.3.1 Population Projection per Municipality

As mentioned in Section - 1, many municipalities were recently created in Paraná State, from the year of 1980 to 1993. The number of municipalities installed during this period is as follows: 1) 20 municipalities in the year of 1983, 2) 01 municipality in 1986, 3) 07 municipalities in 1989, 4) 05 municipalities in 1990 and 5) 48 municipalities in 1993. For this reason, the population per municipality from the census of 1970, 1980 and 1991 could not be used for population projection per municipality for the Study.

Therefore, in accordance with the Counterpart Team, the population projection per municipality was carried out based on the preliminary estimation by IPARDES for the years of 1993, 1995 and 2000 (estimated rural population, urban population and total population per municipality). However, new figures provided by IPARDES in 1995 were applied to the urban population of Mandirituba - MRH 268/Curitiba, Piên - MRH 271/A. Rio Negro and Cafelândia - MRH 288/Extr. Oeste Paranaense, and to the rural population of Foz do Iguaçu - MRH 288/Extr. Oeste Paranaense.

The projection for the target years was carried out by JICA Team, as follows: 1) the population of all municipalities of each MRH, which includes any of the municipalities belonging to the zoning, was estimated based on the trend of increase (or decrease) of the municipalities' population in 1993, 1995 and 2000, divided into urban population and rural population; 2) the total of urban and rural population of these municipalities was adjusted tentatively to the estimated urban and rural population of the MRH to which they belong; 3) finally, the municipalities of each MRH that are included by the zoning and, therefore, belong to the river basin, were separated from those that are not included in the river basin. The estimated population per municipality in 1993 by IPARDES and 2005 and 2015 by JICA Team are shown in Table - 2.8 (1), Table - 2.8 (2), Table - 2.8 (3) and Table - 2.8(4).

2.3.2 Gross Regional Domestic Production (GRDP) Projection per Municipality

GRDP per municipality in 1993 was estimated by the same method mentioned in Section - 2.2.2, but by excluding the contribution of hydroelectric power stations of some municipalities. And the GRDP per Municipality for the target years 2005 and 2015 was estimated individually, based on the past trend of GRDP per municipality during the years of 1981 to 1991 (shown in Table - 2.3 (1)/Table - 2.3 (3)) also excluding the contribution of hydroelectric power stations of some municipalities in 1989 and 1991, and on 1993, by adjusting the estimated GRDP per MRH to the years to which they belong.

The estimated GRDP per Municipality of the 101 municipalities in 1993, 2005 and 2015 are shown in Table - 2.9 (1) and Table - 2.9 (2).

2.3.3 GRDP by Secondary Sector Projection per Municipality

GRDP by Secondary Sector per Municipality in 1993, 2005 and 2015 was estimated using the same method mentioned in the previous Section. This estimation is presented in Table -2.10 (1) and Table - 2.10 (2).

2.3.4 Future Socio-Economic Framework

Based on the population projection per municipality (shown in Table - 2.8 (1)/Table - 2.8(4)), and GRDP projection per municipality in 1993, 2005 and 2015 (shown in Table - 2.9(1) and Table - 2.9(2)), the future socio-economic framework of this river basin can be estimated and conceived through the classification of the 101 municipalities into four categories. There are three remarkable points, as follows:

- 1) 11 large size municipalities (classified in 1st and 2nd classes) will occupy approximately 80% of the total urban population and 81% of the GRDP of this river basin in 2015, respectively.
- 2) 24 large and medium size municipalities will occupy 91% of the urban population and 90% of the GRDP of this river basin in 2015, respectively.
- 3) 14 municipalities in Curitiba Metropolitan Area will share about 62% of the urban population and 68% of the GRDP of this river basin in 2015, respectively.

The classification of these 101 municipalities with their participation, in percentage, in this river basin's urban population and GRDP in 1993, 2005 and 2015, are shown in Table - 2.7.

2.4 Alternative Socio-Economic Framework (Alternative Case)

In Section - 1, the alternative regional development plan was estimated as shown below in Table - 2.5, using the MRH as regional unit.

Table - 2.5 Restriction and Distribution of Urban Population, GRDP (Secondary and Tertiary Sector) and GRDP of Secondary Sector, in 2005 and 2015

No. and Name of MRH	2005				2015			
	%	Urban Population	GRDP (2nd and 3rd Sector) US\$ million	GRDP of 2nd Sector US\$ million	%	Urban Population	GRDP (2nd and 3rd Sector) US\$ million	GRDP of 2nd Sector US\$ million
MRH 268/Curitiba	100.00	(253,000)	(1,950.00)	(750.00)	100.00	(465,000)	(5,100.00)	(1,900.00)
MRH 271/C. Ponta Grossa	14.70	37,200	285.00	110.00	14.40	67,000	735.00	275.00
MRH 281/N.N. Londrina	31.30	79,200	610.00	235.00	30.60	142,200	1,560.00	580.00
MRH 282/N.N. Maringá	18.30	46,300	355.00	140.00	18.40	85,600	935.00	350.00
MRH 288/Extr. Oeste Paranaense	35.70	90,300	700.00	265.00	36.60	170,200	1,870.00	695.00

Remark: % is percentage of distribution per MRH

: The values of GRDP of Secondary Sector and Tertiary Sector are in current million US\$

According to the concept of the alternative development plan (described in Section - 1), it was considered that three municipalities: Cascavel, Foz do Iguaçu and Toledo participate in MRH 268/Extr. Oeste Paranaense. The participation of these three municipalities is shown in Table - 2.6.

Table - 2.6 Participation of Urban Population, GRDP (Secondary Sector and Tertiary Sector) and GRDP by Secondary Sector of Three Municipalities in 2005 and 2015 by Alternative Case

YEAR	2005				2015			
	%	Urban Population	GRDP (2nd and 3rd Sectors) US\$ million	GRDP of 2nd Sector US\$ million	%	Urban Population	GRDP (2nd and 3rd Sectors) US\$ million	GRDP of 2nd Sector US\$ million
MRH 288/Extr. Oeste Paranaense	100.00	(90,300)	(700.00)	(265.00)	100.00	(170,200)	(1,870.00)	(695.00)
274 Cascavel	35.00	31,600	250.00	95.00	35.00	59,600	655.00	240.00
282 Foz do Iguaçu	50.00	45,200	350.00	135.00	50.00	85,100	935.00	350.00
312 Toledo * (1)	15.00	13,500	100.00	35.00	15.00	25,500	280.00	105.00

Remark: Toledo is located in other basin

Table - 2.7 Classification of Municipalities Related to Urban Population and GRDP per Municipality in 1993, 2005 and 2015/Iguaçu River Basin

Classification	No. and Name of MRH	No. and Name of Municipality	1993			2005			2015							
			Urban Population		GRDP	Urban Population		GRDP	Urban Population		GRDP					
			Population	%	US\$ million	Population	%	US\$ million	Population	%	US\$ million	%				
1st Class	MRH 268/Curitiba	9	1,337,892	44.39	6,542.87	43.10	1,546,490	38.02	13,980.55	48.07	1,717,150	35.03	24,458.37	49.41		
2nd Class	MRH 268/Curitiba	1	65,600	2.18	66.17	0.44	121,910	3.00	128.74	0.44	169,730	3.46	228.89	0.46		
		2	59,259	1.97	2,297.79	15.14	102,280	2.51	2,282.11	7.85	138,700	2.83	2,875.49	5.81		
		7	120,802	4.01	175.8	1.16	208,640	5.13	365.45	1.26	283,000	5.77	650.79	1.31		
		10	26,498	0.88	14.13	0.09	76,310	1.88	52.54	0.18	119,160	2.43	94.39	0.19		
		13	75,045	2.49	162.28	1.07	102,520	2.52	374.34	1.29	125,690	2.56	683.10	1.38		
		17	122,604	4.07	589.51	3.88	210,330	5.17	1,488.28	5.12	284,590	5.81	2,701.15	5.46		
		274	183,746	6.16	717.99	4.73	250,280	6.15	1,338.17	4.60	303,280	6.19	2,244.22	4.53		
		MRH 288/Extremo Oeste Paranaense	282	204,365	6.78	929.14	6.12	353,920	8.70	2,278.95	7.84	479,380	9.78	4,195.54	8.48	
		MRH 289/Sudoeste Paranaense	327	48,417	1.61	207.72	1.37	73,320	1.80	330.21	1.14	100,490	2.05	561.93	1.14	
		MRH 290/Campos de Guarapuava	352	117,385	3.89	543.10	3.58	154,360	3.79	955.40	3.29	179,920	3.67	1,644.84	3.32	
		MRH 268/Curitiba	5	1,025,721	34.03	5,703.63	37.87	1,653,870	40.66	9,594.19	32.99	2,183,940	44.56	15,880.34	32.08	
	3rd Class	MRH 268/Curitiba	5	13,192	0.30	30.64	0.20	40,100	0.99	79.66	0.27	61,440	1.25	150.19	0.30	
			6	55,837	1.85	233.92	1.54	72,070	1.77	573.15	1.97	85,590	1.75	963.60	1.95	
			14	20,482	0.68	12.42	0.08	25,580	0.63	93.68	0.32	29,650	0.60	170.78	0.35	
			15	9,149	0.30	54.47	0.36	18,150	0.45	98.92	0.34	25,810	0.53	167.62	0.34	
			MRH 272/C. da Lapa	33	20,074	0.67	65.04	0.43	24,860	0.61	125.42	0.43	28,970	0.59	209.12	0.42
			MRH 275/São Mateus do Sul	36	20,643	0.68	211.77	1.40	24,120	0.59	374.27	1.29	27,140	0.55	672.59	1.36
		MRH 288/Ext. Oeste Paranaense	48	16,489	0.55	77.7	0.51	21,120	0.52	136.99	0.47	25,010	0.51	242.51	0.49	
		MRH 289/Sudoeste Paranaense	294	30,268	1.00	86.01	0.57	36,360	0.89	145.46	0.50	41,230	0.84	193.77	0.39	
		MRH 290/Campos de Guarapuava	324	21,463	0.70	128.57	0.85	35,060	0.86	207.56	0.71	45,560	0.93	345.24	0.70	
		MRH 291/Médio Iguaçu	333	43,856	1.46	132.78	0.87	56,450	1.39	223.69	0.77	67,550	1.38	371.86	0.75	
4th Class	MRH 290/Campos de Guarapuava	351	6,792	0.23	14.71	0.10	17,910	0.44	27.22	0.09	39,360	0.80	44.96	0.09		
	MRH 291/Médio Iguaçu	367	25,957	0.86	87.42	0.58	35,420	0.87	117.53	0.40	45,210	0.92	201.66	0.41		
	MRH 291/Médio Iguaçu	371	39,979	1.33	131.54	0.87	41,120	1.01	248.53	0.85	41,460	0.85	443	0.89		
	Other 77 Municipalities	371	326,181	10.82	1,266.99	8.35	448,320	11.02	2,452.08	8.43	563,980	11.51	4,176.90	8.44		
TOTAL OF THE MUNICIPALITIES OF THE BASIN		3,013,738	100.00	15,179.99	100.00	4,067,850	100.00	29,083.47	100.00	4,901,630	100.00	49,498.62	100.00			

Remark: GRDP per Municipality not including contribution of Hydroelectric Power Stations

Table - 2.8 (1) Projected Population per Municipality in 1993, 2005 and 2015, and Area per Municipality / Iguacu River Basin

No. and Name of MPRH	No. and Name of Municipality	Population										Area		
		1993			2005			2015			Urban Area	Total Area	Area involved Km ²	
		URBAN	RURAL	TOTAL	URBAN	RURAL	TOTAL	URBAN	RURAL	TOTAL				
MPRH 268 CURITIBA	Total of MPRH	1,949,043	126,226	2,075,269	2,582,200	113,700	2,695,900	3,112,700	96,700	3,209,400	---	---	---	
	1 Alm. Tamarandare	65,600	7,045	72,645	121,910	6,530	128,440	169,730	6,230	175,960	Y	521.3	36.31	
	2 Araucaria	59,259	7,680	66,939	102,280	7,120	109,400	138,700	6,800	145,500	Y	503.7	100.00	
	3 Balsa Nova	2,627	5,266	7,893	4,350	4,910	9,260	5,810	4,170	9,980	Y	321.9	99.32	
	5 Campina Grande do Sul	15,192	6,750	21,942	40,100	5,870	45,970	61,440	4,980	66,420	(PN)	554.4	14.28	
	6 Campo Largo	55,857	18,791	74,628	72,070	15,930	88,000	85,590	13,520	99,110	Y	1,262.9	23.53	
	7 Colombo	120,802	7,404	128,206	208,640	6,420	215,060	283,000	5,750	288,750	Y	189.6	67.29	
	8 Contenda	4,925	4,118	9,043	6,000	3,850	9,850	6,890	3,690	10,580	Y	222.2	100.00	
	9 Curitiba	1,337,892	0	1,337,892	1,546,490	0	1,546,490	1,717,150	0	1,717,150	Y	431.7	100.00	
	10 Fazenda Rio Grande	26,498	3,401	29,899	76,310	3,760	80,070	119,160	3,190	122,350	Y	110.9	100.00	
	12 Mandrituba	4,669	9,452	14,121	6,700	9,460	16,160	8,410	8,030	16,440	Y	392.3	100.00	
	13 Pinhais	75,045	3,843	78,888	102,520	4,490	107,010	125,690	3,810	129,500	Y	98.2	100.00	
	14 Piraquara	20,482	12,847	33,329	24,580	13,470	38,050	29,650	11,440	41,090	Y	171.9	100.00	
	15 Quatro Barras	9,149	1,825	10,974	18,150	1,420	19,570	23,810	1,120	26,930	Y	183.2	54.32	
	17 S. José dos Pinhais	122,604	16,652	139,256	210,330	14,920	225,250	284,590	12,660	297,250	Y	916.1	73.60	
	Subtotal of Municipalities of Basin		1,920,581	105,074	2,025,655	2,541,430	98,150	2,639,580	3,061,620	85,390	3,147,010	---	---	---
	Subtotal of Municipalities not of Basin		28,462	21,152	49,614	40,770	15,550	56,320	51,080	11,310	62,390	---	---	---
MPRH 271 A. RIO NEGRO	Total of MPRH	6,081	33,468	39,549	9,100	36,200	45,300	11,200	36,100	47,300	---	---	---	
	28 Agudos do Sul	752	5,451	6,203	740	5,890	6,630	640	5,870	6,510	Y	259.6	100.00	
	29 Pien	1,541	6,464	8,005	3,420	6,830	10,250	4,770	6,820	11,590	Y	261.7	100.00	
	30 Quitandinha	2,508	12,239	14,747	3,310	12,950	16,260	3,910	12,910	16,820	Y	419.4	100.00	
	31 Tijucas do Sul	1,280	9,314	10,594	1,630	10,530	12,160	1,880	10,500	12,380	Y	678.9	62.25	
	Subtotal of Municipalities of Basin	6,081	33,468	39,549	9,100	36,200	45,300	11,200	36,100	47,300	---	---	---	
Subtotal of Municipalities not of Basin	0	0	0	0	0	0	0	0	0	---	---	---		
MPRH 272 C DA LAPA	Total of MPRH	60,616	46,044	106,660	73,600	46,400	120,000	84,800	44,100	128,900	---	---	---	
	32 Campo do Tenente	2,243	3,276	5,519	3,900	3,530	7,430	5,310	3,510	8,820	Y	314.0	100.00	
	33 Lapa	20,074	20,809	40,883	24,860	19,810	44,670	28,970	18,010	46,980	Y	2,203.9	100.00	
	34 Palmeira	0	0	0	0	0	0	0	0	0	N	1,500.8	18.22	
	35 Porto Amazonas	2,435	1,225	3,658	2,820	1,380	4,200	3,150	1,420	4,570	Y	206.8	73.98	
	36 Rio Negro	20,643	6,203	26,846	24,120	6,180	30,300	27,140	5,820	32,960	S	605.2	100.00	
Subtotal of Municipalities of Basin	45,395	31,511	76,906	53,700	30,900	84,600	64,570	28,760	93,330	---	---	---		
Subtotal of Municipalities not of Basin	15,221	14,533	29,754	17,900	15,500	33,400	20,230	15,340	35,570	---	---	---		
MPRH 275 S. MATEUS DO SUL	Total of MPRH	20,122	34,552	54,674	26,300	35,000	61,300	31,500	33,100	64,600	---	---	---	
	46 Antônio Olinto	675	7,268	7,943	1,120	7,390	8,510	1,490	7,000	8,490	Y	482.5	100.00	

(To be continued)

Table - 2.8 (2) Projected Population per Municipality in 1993, 2005 and 2015, and Area per Municipality / Iguaçú River Basin

(Continuation)

No. and Name of MRR	No. Name	Population						Area					
		1993			2005			Urban Area	Total Area	Area involved			
		URBAN	RURAL	TOTAL	URBAN	RURAL	TOTAL			%	Km ²		
MRR 275	C. DE PONTA GROSSA	2,958	9,679	12,637	4,060	9,600	13,660	5,000	8,940	13,940	712.2	99.43	708.1
	Cont.	16,489	17,605	34,094	21,120	18,010	39,130	25,010	17,160	42,170	1,332.8	100.00	1,532.8
	Subtotal of Municipalities of Basin	20,122	34,552	54,674	26,300	35,000	61,300	31,500	33,100	64,600			
	Subtotal of Municipalities not of Basin	0	0	0	0	0	0	0	0	0			
MRR 276	Coê. de IRATI	71,821	103,597	175,418	90,400	103,300	193,700	105,900	97,300	203,200	896.8	45.51	408.1
	Cont.	0	0	0	0	0	0	0	0	0			
	Subtotal of Municipalities of Basin	5,948	6,146	12,094	9,040	5,170	14,210	11,610	4,160	15,770	672.8	100.00	672.8
	Cont.	5,579	7,636	13,215	7,000	7,680	14,680	8,190	7,280	15,470	304.7	98.85	498.9
	Subtotal of Municipalities of Basin	3,260	9,426	12,686	3,710	10,090	13,800	4,090	10,010	14,100	642.6	100.00	642.6
	Subtotal of Municipalities not of Basin	14,787	23,208	37,995	19,750	22,940	42,690	23,890	21,450	45,340			
	Cont.	57,034	80,389	137,423	70,650	80,360	151,010	82,010	75,850	157,860			
MRR 288	Ext. Oeste Paranaense	765,125	265,796	1,030,921	1,069,000	160,800	1,229,800	1,320,500	100,300	1,420,800	232.2	100.00	232.2
	Cont.	3,140	7,020	10,160	2,770	6,210	8,980	2,430	5,230	7,660	279.8	100.00	279.8
	Subtotal of Municipalities of Basin	5,799	5,996	11,795	5,630	2,280	7,910	5,440	960	6,400	2,157.5	57.57	1,198.90
	Cont.	185,746	14,184	199,930	250,280	9,020	259,300	303,280	5,890	309,170	593.9	100.00	593.9
	Subtotal of Municipalities of Basin	5,050	5,693	10,743	6,230	3,700	9,930	7,180	2,450	9,630	1,185.0	79.09	937.2
	Cont.	5,720	3,637	9,357	6,520	3,330	9,850	7,210	3,090	10,300	476.1	65.58	312.2
	Subtotal of Municipalities of Basin	204,365	3,738	208,103	353,920	1,020	354,940	479,380	330	479,710	1,052.5	47.03	495
	Cont.	7,965	12,965	20,930	9,500	9,120	18,620	10,720	6,470	17,190	151.7	97.79	148.3
	Subtotal of Municipalities of Basin	4,018	2,274	6,292	5,630	2,080	7,710	6,960	1,810	8,770	273.2	100.00	273.2
	Cont.	847	5,472	6,319	480	3,250	3,730	290	2,000	2,290	611.4	98.37	601.4
	Subtotal of Municipalities of Basin	8,529	4,551	13,080	9,580	2,010	11,590	10,400	960	11,360	799.2	71.72	621.1
	Cont.	30,268	8,392	38,660	36,360	5,040	41,400	41,230	3,130	44,360	137.1	100.00	137.1
	Subtotal of Municipalities of Basin	1,874	2,725	4,599	1,810	1,280	3,090	1,740	640	2,380	423.3	55.64	235.5
	Cont.	3,370	2,371	5,941	3,900	1,470	5,370	4,320	880	5,200	289.8	55.94	162.1
	Subtotal of Municipalities of Basin	12,189	2,329	14,518	16,410	1,490	17,900	19,880	970	20,850	997.2	45.70	455.7
	Cont.	10,321	9,401	19,722	12,850	4,390	17,240	14,900	2,210	17,110	521.7	100.00	521.7
	Subtotal of Municipalities of Basin	4,040	10,060	14,100	3,940	6,160	10,100	3,830	3,890	7,720			
	Cont.	490,101	93,988	584,089	723,040	55,640	778,680	919,190	40,910	960,100			
	Subtotal of Municipalities of Basin	271,884	164,788	436,672	343,190	98,950	442,140	401,310	59,390	460,700			
	Cont.	235,122	258,203	493,325	305,400	162,100	467,500	366,300	93,500	459,800			
	Subtotal of Municipalities of Basin	6,043	6,760	12,803	6,700	4,200	10,900	7,050	1,870	8,920	307.9	100.00	307.9
	Cont.	4,815	9,140	13,955	7,420	5,360	12,780	9,410	2,010	11,420	386.4	100.00	386.4
	Subtotal of Municipalities of Basin	541	3,129	3,670	900	1,940	2,840	1,190	1,160	2,350	249.4	100.00	249.4

(To be continued)

Table - 2.8 (3) Projected Population per Municipality in 1993, 2005 and 2015, and Area per Municipality / Iguaçú River Basin

No. and Name of MPRH	No. and Name of Municipality	Population										Area		
		1993			2005			2015			Urban Area	Total Area	Area involved %	Km²
		URBAN	RURAL	TOTAL	URBAN	RURAL	TOTAL	URBAN	RURAL	TOTAL				
MPRH 289 Sudoeste Paranaense Cont.	319 Bom Sucesso do Sul	1,036	2,799	3,835	1,350	2,510	3,860	1,570	2,040	3,610	Y	135.3	100.00	135.3
	320 Capanema	7,798	10,662	18,460	7,360	6,060	13,420	6,760	2,040	8,800	Y	403.9	100.00	403.9
	321 Chopinzinho	8,437	11,159	19,596	9,790	7,380	17,170	10,640	3,800	14,440	Y	992.5	100.00	992.5
	322 Coronel Vivida	12,518	12,285	24,803	14,240	8,820	23,060	15,260	5,330	20,590	Y	681.5	100.00	681.5
	323 Cruzeiro do Iguaçú	2,045	3,136	5,181	3,400	1,930	5,330	4,460	1,160	5,620	Y	96.6	100.00	96.6
	324 Dois Vizinhos	21,463	10,350	31,813	35,060	5,600	40,660	45,560	3,000	48,560	Y	372.7	100.00	372.7
	325 Enxias Marques	1,423	5,822	7,245	1,880	4,210	5,790	1,660	2,570	4,230	Y	234.7	100.00	234.7
	326 Flor da Serra do Sul	304	4,884	5,188	360	4,400	4,760	390	3,600	3,990	Y	94.7	100.00	94.7
	327 Francisco Beltrão	48,417	15,017	63,434	73,320	10,760	84,080	100,490	6,500	106,990	Y	696.7	100.00	696.7
	328 Itapejara do Oeste	3,962	4,903	8,865	4,600	3,350	7,950	5,000	1,850	6,850	Y	246.0	100.00	246.0
	329 Maripolis	2,896	3,368	6,264	3,280	2,860	6,140	3,300	2,190	5,690	Y	232.1	100.00	232.1
	330 Marmeleiro	6,197	9,225	15,422	9,870	9,290	19,260	12,700	8,530	21,230	Y	449.9	100.00	449.9
	331 N. Esperança do Sudoeste	713	4,730	5,443	820	4,430	5,250	900	3,750	4,650	Y	176.9	100.00	176.9
	332 N. Prata do Iguaçú	4,147	6,790	10,937	4,200	3,650	7,850	4,120	1,950	6,070	Y	333.0	100.00	333.0
	333 Pato Branco	43,856	9,210	53,066	56,450	7,310	63,760	67,550	5,140	72,690	Y	570.2	100.00	570.2
	334 Peróla do Oeste	3,219	8,454	11,673	3,280	5,050	8,330	3,240	2,030	5,270	Y	330.1	100.00	330.1
	335 Pinhal São Bento	544	2,193	2,737	630	1,480	2,110	690	810	1,500	Y	107.6	100.00	107.6
	336 Planalto	4,064	10,336	14,400	4,200	6,210	10,410	4,190	2,530	6,720	Y	337.1	100.00	337.1
	337 Pranchita	2,729	5,579	8,308	3,750	3,200	6,950	4,500	1,120	5,620	Y	297.1	100.00	297.1
	338 Realiza	9,173	7,231	16,404	8,980	4,150	13,130	8,540	2,340	10,880	Y	351.9	100.00	351.9
	339 Renascença	2,120	5,348	7,468	2,010	4,820	6,830	1,850	3,920	5,770	Y	434.7	100.00	434.7
	340 Salgado Filho	1,804	9,278	11,082	2,150	7,370	9,520	2,380	5,180	7,560	Y	506.4	100.00	506.4
	341 Salto de Lontra	4,798	8,601	13,399	6,300	5,030	11,330	7,380	1,860	9,240	Y	336.9	100.00	336.9
	342 S. Izabel do Oeste	4,573	7,388	11,961	4,470	4,560	9,030	4,250	2,010	6,260	Y	330.5	100.00	330.5
	343 S. Antônio Sudoeste	8,554	8,431	16,985	9,740	5,040	14,780	10,540	2,010	12,550	Y	313.8	100.00	313.8
	344 São João	4,899	8,343	13,242	5,930	5,070	11,000	6,630	2,130	8,760	Y	408.9	100.00	408.9
	345 São Jorge do Oeste	3,746	6,097	9,843	3,330	3,750	7,080	2,880	1,620	4,500	Y	385.1	100.00	385.1
	346 Saúde do Iguaçú	1,943	2,656	4,599	2,290	2,220	4,510	2,520	1,670	4,190	Y	147.8	100.00	147.8
	347 Solina	931	3,964	4,895	820	2,330	3,150	700	1,340	2,040	Y	158.5	100.00	158.5
348 Verê	2,769	7,186	9,955	3,730	4,800	8,530	4,420	2,560	6,980	Y	345.6	100.00	345.6	
349 Vitorino	2,645	3,749	6,394	3,090	2,860	5,950	3,380	1,900	5,280	Y	326.1	100.00	326.1	
Subtotal of Municipalities of Basin		235,122	238,203	473,325	305,400	162,100	467,500	366,300	93,500	459,800	--	--	--	--
Subtotal of Municipalities not of Basin		0	0	0	0	0	0	0	0	0	--	--	--	--

(To be continued)

Table - 2.8 (4) Projected Population per Municipality in 1993, 2005 and 2015, and Area per Municipality / Iguazu River Basin (Continuation)

No. and Name of MRH	No. and Name of Municipality	Population										Area		
		1993			2005			2015			Urban Area	Total Area	Area involved	
		URBAN	RURAL	TOTAL	URBAN	RURAL	TOTAL	URBAN	RURAL	TOTAL			%	Km ²
MRH 290 C. de Guaruapuava	Total of MRH	179,566	157,625	337,191	230,700	159,500	390,200	276,000	152,100	428,100	Y	999.8	100.00	999.8
	350 Candió	1,811	17,459	19,270	2,320	19,970	22,290	2,520	19,790	22,310	Y	1,844.5	41.97	774.1
	351 Camargalo	6,792	20,200	26,992	17,910	22,170	40,080	39,360	21,960	61,320	Y	4,152.2	81.95	3,402.70
	352 Guarapuava	117,385	27,041	144,426	154,360	29,050	183,410	179,920	28,780	208,700	Y	897.5	98.04	879.9
	353 Itacio Martins	2,527	11,858	14,385	2,850	14,660	17,510	2,830	14,520	17,350	Y	1,182.5	89.20	1,052.70
	354 Laranjeiras do Sul	19,954	11,473	31,427	19,380	7,850	27,230	17,020	5,750	22,770	Y	1,283.7	45.09	578.8
	355 Nova Laranjeiras	316	12,035	12,351	310	9,840	10,150	270	8,410	8,680	Y	2,875.2	100.00	2,875.2
	356 Pinhão	10,068	24,076	34,144	7,760	26,820	34,580	5,620	26,580	32,200	Y	1,192.9	100.00	1,192.9
	357 Quedas do Iguazu	16,343	14,885	31,228	19,260	12,170	31,430	19,880	10,380	30,260	Y	459.3	100.00	459.3
	358 Rio Bonito Iguazu	694	4,502	5,196	680	3,690	4,370	600	3,150	3,750	Y	198.4	100.00	198.4
360 Virmond	611	2,847	3,458	600	2,350	2,950	540	1,990	2,530	Y	—	—	—	
Subtotal of Municipalities of Basin		176,501	146,376	322,877	225,430	148,550	373,980	268,560	141,310	409,870	—	—	—	—
Subtotal of Municipalities not of Basin		3,065	11,249	14,314	5,270	10,950	16,220	7,440	10,790	18,230	—	—	—	—
MRH 291 Medio Iguazu	Total of MRH	105,048	75,963	181,011	131,700	70,900	202,600	154,800	63,100	217,900	Y	1,209.7	100.00	1,209.7
	361 Binuruna	5,881	7,170	13,051	8,510	6,030	14,540	10,630	4,830	15,460	Y	708.4	100.00	708.4
	362 Clevelândia	13,277	4,718	17,995	13,450	4,410	17,860	13,400	3,920	17,320	Y	1,500.5	100.00	1,500.5
	363 Cruz Machado	2,540	14,275	16,815	3,160	14,590	17,690	3,650	13,920	17,570	Y	1,063.7	100.00	1,063.7
	364 General Carneiro	6,670	5,123	11,793	11,800	4,300	16,100	16,050	3,420	19,470	Y	806.6	100.00	806.6
	365 Honório Serpa	803	7,075	7,878	1,530	7,590	9,120	2,130	7,570	9,700	Y	801.3	100.00	801.3
	366 Mangueirinha	4,783	13,912	18,695	9,090	14,450	23,540	12,660	14,040	26,700	Y	3,125.5	100.00	3,125.5
	367 Palmas	25,957	9,860	35,817	35,420	6,620	42,050	45,210	3,800	49,010	Y	417.0	100.00	417.0
	368 Paula Freitas	1,639	3,091	4,730	3,200	2,410	5,610	4,490	1,760	6,250	Y	377.5	100.00	377.5
	369 Paulo Frontin	1,648	5,060	6,708	2,360	5,460	7,820	2,940	5,470	8,410	Y	220.2	100.00	220.2
370 Porto Vitória	1,871	1,916	3,787	2,060	1,750	3,810	2,180	1,530	3,710	Y	773.9	100.00	773.9	
371 União da Vitória	39,979	3,763	43,742	41,120	3,340	44,460	41,460	2,840	44,300	Y	—	—	—	
Subtotal of Municipalities of Basin		105,048	75,963	181,011	131,700	70,900	202,600	154,800	63,100	217,900	—	—	—	—
Subtotal of Municipalities not of Basin		0	0	0	0	0	0	0	0	0	—	—	—	—
TOTAL OF MUNICIPALITIES OF THE BASIN		3,013,738	782,343	3,796,081	4,037,850	660,380	4,698,230	4,901,630	543,620	5,445,250	—	—	—	—

Source: IPARDES - Population in 1993, SANEPAR - Area of Municipality

Remark: Population in 1993 projected by IPARDES, and in 2005 and 2015 were projected by JICA Team.

Population of Mandrituba / MRH 268, Pícn / MRH 271 and Foz do Iguazu, Catiandá / MRH 288 in 1993 were revised by IPARDES in 1995

Figure of Iratú/MRH 276 and Palmeira/MRH 272 are listed in Tibagi River Basin

Urban Area: Y = Urban Area in the River Basin, P = Part of the Urban Area in the River Basin, N = Urban Area not included in the River Basin, (P)N = Topographically the Urban Area does not belong to the River Basin, but the Study will consider it as part of the Basin

Table - 2.9 (I) Estimated GRDP per Municipality in 1993, 2005 and 2015 - Excluding Contribution of Hydroelectric Power Station / Iguau River Basin

No. and Name of MRH	No. and Name of Municipality		Units million US\$			
	No.	Name	1993 US\$	2005 US\$	2015 US\$	
MRH 268 Curitiba	TOTAL of MRH		10.538,30	20.213,73	34.326,41	
	1	Almirante Tamandar	66,17	128,74	228,89	
	2	Araucária	2.297,79	2.282,11	2.875,49	
	3	Balsa Nova	93,81	199,23	355,53	
	5	Campina Grande do Sul	30,64	79,66	150,19	
	6	Campo Largo	233,92	573,15	963,60	
	7	Colombo	175,80	365,45	650,79	
	8	Confenda	12,22	22,41	33,39	
	9	Curitiba	6.542,87	13.980,55	24.458,37	
	12	Mandirituba	11,65	11,65	11,65	
	14	Piraquara	12,42	93,68	170,78	
	15	Quatro Barras	54,47	98,92	167,62	
	10	Fazenda Rio Grande	14,13	52,54	94,39	
	13	Pinhais	162,28	374,34	683,10	
	17	São José dos Pinhais	589,51	1.488,28	2.701,15	
	Subtotal of Municipalities of Basin			10.297,88	19.750,71	33.544,94
	Subtotal of Municipalities not of Basin			240,62	463,02	781,47
	MRH 271 Alto Rio Negro	TOTAL of MRH		32,22	61,37	105,60
28		Agudos do Sul	2,22	4,02	6,49	
29		Pien	11,69	21,76	37,43	
30		Quitandinha	6,62	8,61	11,87	
31		Tijucas do Sul	11,69	26,98	49,81	
Subtotal of Municipalities of Basin			32,22	61,37	105,60	
Subtotal of Municipalities not of Basin			0,00	0,00	0,00	
MRH 272 Campos da Lapa	TOTAL of MRH		362,82	667,94	1.163,22	
	32	Campo do Tenente	6,44	14,31	25,86	
	33	Lapa	65,04	125,42	209,12	
	34	Palmeira	0,00	0,00	0,00	
	35	Porto Amazonas	3,08	8,20	14,53	
	36	Rio Negro	211,77	374,27	672,59	
Subtotal of Municipalities of Basin			286,33	522,20	922,10	
Subtotal of Municipalities not of Basin			76,49	145,74	241,12	
MRH 275 São Mateus do Sul	TOTAL of MRH		85,74	160,89	282,33	
	46	Antônio Olinto	2,41	9,89	16,45	
	47	São João do Triunfo	5,63	14,01	23,37	
	48	São Mateus do Sul	77,70	136,99	242,51	
Subtotal of Municipalities of Basin			85,74	160,89	282,33	
Subtotal of Municipalities not of Basin			0,00	0,00	0,00	
MRH 276 Colonial Irati	TOTAL of MRH		200,55	383,92	637,92	
	50	Irati	0,00	0,00	0,00	
	51	Mallet	13,89	34,09	57,62	
	53	Rebouças	8,23	19,54	32,98	
	54	Rio Azul	9,80	17,11	28,27	
Subtotal of Municipalities of Basin			31,92	70,74	118,87	
Subtotal of Municipalities not of Basin			168,63	313,18	519,05	
MRH 288 Extremo Oeste Paranaense	TOTAL of MRH		3.234,55	5.711,90	9.048,13	
	269	Boa Vista da Aparecida	5,90	13,32	21,25	
	273	Capitão Leônidas Marques	14,24	14,24	14,24	
	274	Cascavel	717,99	1.338,17	2.244,42	
	275	Catanduvas	19,55	23,53	27,10	
	276	Céu Azul	52,80	87,18	121,09	
	282	Foz do Iguaçu	929,14	2.278,95	4.195,54	
	284	Guaraniaçu	21,85	96,08	171,66	
	285	Ibema	13,27	15,69	18,97	
	290	Lindoeste	3,51	6,90	11,02	
	293	Matelândia	32,97	32,97	32,97	
	294	Medianeira	86,01	145,46	193,77	
	305	Santa Lúcia	2,78	2,78	2,78	
	306	Santa Tereza do Oeste	6,64	13,06	20,85	
	307	Santa Terezinha do Itaipu	13,63	23,97	26,38	
309	São Miguel do Iguaçu	61,04	157,74	229,13		
313	Três Barras do Paran	13,10	24,63	36,14		
Subtotal of Municipalities of Basin			1.994,42	4.274,67	7.367,31	
Subtotal of Municipalities not of Basin			1.240,13	1.437,23	1.680,82	
MRH 289 Sudoeste Paranaense	TOTAL of MRH		1.006,21	1.545,03	2.428,76	
	316	Ampere	24,29	34,99	55,79	
	317	Barracão	5,30	5,30	5,30	
	318	Boa Esperança do Iguaçu	4,12	7,25	12,03	

(to be continued)

Table - 2.9 (2) Estimated GRDP per Municipality in 1993, 2005 and 2015 - Excluding Contribution of Hydroelectric Power Station / Iguazu River Basin

No. and Name of MRH	No. and Name of Municipality	Unit: million US\$ (continuation)			
		1993 US\$	2005 US\$	2015 US\$	
MRH 289 Sudoeste Paranaense (cont.)	319	Bom Sucesso do Sul	6,17	10,85	18,02
	320	Capansma	32,32	32,32	32,32
	321	Chopinzinho	93,67	165,73	275,31
	322	Coronel Vivida	34,00	46,36	62,41
	323	Cruzeiro do Iguazu	10,53	18,53	30,76
	324	Dois Vizinhos	128,57	207,56	345,24
	325	Eneas Marques	6,77	11,91	19,77
	326	Flor da Serra do Sul	2,24	3,94	6,54
	327	Francisco Beltrão	207,72	330,21	561,93
	328	Itapejara do Oeste	15,78	15,78	15,78
	329	Mariópolis	14,33	16,05	20,03
	330	Marmeleiro	16,36	22,01	29,60
	331	Nova Esperança do Sudoeste	3,49	6,14	10,19
	332	Nova Prata do Iguazu	18,78	34,41	56,90
	333	Pato Branco	132,78	223,69	371,86
	334	Pérola do Oeste	8,52	8,52	8,52
	335	Pinhal de São Bento	0,72	1,27	2,10
	336	Planalto	13,91	13,91	13,91
	337	Pranchita	11,51	26,43	43,26
	338	Realeza	30,14	30,14	30,14
	339	Renascença	12,21	16,63	19,01
	340	Salgado Filho	6,99	9,50	13,29
	341	Salto do Lontra	20,06	35,29	58,59
	342	Santa Izabel do Oeste	17,91	25,67	37,60
	343	Santo Antônio do Sudoeste	20,64	36,31	60,23
	344	São João	30,39	40,55	63,58
	345	São Jorge do Oeste	28,69	34,04	39,26
	346	Saudade do Iguazu	15,20	26,74	44,40
	347	Sulina	10,69	18,81	31,22
	348	Ver	11,39	15,67	19,42
	349	Vitorino	10,02	12,53	14,40
		Subtotal of Municipalities of Basin	1.006,21	1.545,04	2.428,76
		Subtotal of Municipalities not of Basin	0,00	0,00	0,00
	MRH 290 Campos de Guarapuava	TOTAL of MRH	1.022,30	2.000,58	3.480,28
	350	Candói	90,60	167,65	276,90
	351	Cantagalo	14,71	27,22	44,96
	352	Guarapuava	543,10	935,40	1.644,84
	353	Inácio Martins	12,61	12,95	16,92
	354	Laranjeiras do Sul	59,32	136,83	248,49
	355	Nova Laranjeiras	6,82	15,73	28,57
	356	Pinhão	98,53	186,11	326,19
	357	Quedas do Iguazu	87,15	220,60	390,26
	358	Rio Bonito do Iguazu	70,98	163,73	297,33
	360	Vimond	8,96	20,67	37,53
	Subtotal of Municipalities of Basin	992,78	1.936,89	3.311,99	
	Subtotal of Municipalities not of Basin	29,52	93,69	168,29	
MRH 291 Médio Iguazu	TOTAL of MRH	452,69	790,96	1.416,72	
	361	Bituruna	44,62	100,34	195,25
	362	Clevelândia	45,03	70,53	109,07
	363	Cruz Machado	27,73	77,61	154,26
	364	General Carneiro	21,89	44,23	78,76
	365	Honório Serpa	6,92	8,93	15,79
	366	Mangueirinha	70,73	91,06	161,36
	367	Palmas	87,42	117,53	201,66
	368	Paula Freitas	4,10	7,02	12,02
	369	Paulo Frontin	6,00	10,87	19,16
	370	Porto Vitória	6,71	14,31	26,39
	371	União da Vitória	131,54	248,53	443,00
	Subtotal of Municipalities of Basin	452,69	790,96	1.416,72	
	Subtotal of Municipalities not of Basin	0,00	0,00	0,00	
TOTAL OF THE MUNICIPALITIES OF THE BASIN		13.179,99	29.083,47	49.498,62	

Source: Fundo de Participação dos Municípios - Índices Provisórios - 95 (Municipalities' Participation Fund - Preliminary Indexes - 95) - SEFA

Remark: Values in Current US\$ were estimated by JICA Team
: Palmeira MRH 272 and Irati MRH 276 were listed in Tibagi River Basin

Table-2.10 (1) Estimated GRDP by Secondary Sector per Municipality in 1993, 2005 and 2015
- Excluding Contribution of Hydroelectric Power Station/Iguaçu River Basin

No. and Name of MRH	No. and Name of Municipality	(Unit: ... million US\$)			
		1993 US\$	2005 US\$	2015 US\$	
MRH 268 Curitiba	TOTAL of MRH	4 261,84	7.743,53	12 844,63	
	1 Almirante Tamandare	27,86	53,18	95,10	
	2 Araucaria	1.152,47	1.308,39	1.800,25	
	3 Balsa Nova	52,32	99,02	175,85	
	5 Campina Grande do Sul	11,14	33,34	65,91	
	6 Campo Largo	110,76	252,93	415,65	
	7 Colombo	74,63	151,44	266,46	
	8 Contenda	1,44	2,66	5,06	
	9 Curitiba	2.390,16	4.815,82	8.196,53	
	10 Fazenda Rio Grande	4,48	9,19	17,29	
	12 Mandirituba	1,53	3,07	5,76	
	13 Pinhais	65,55	192,75	357,12	
	14 Piraquara	3,94	11,65	21,59	
	15 Quatro Barras	28,35	41,98	67,79	
	17 Sao Jose dos Pinhais	212,77	573,91	1.040,71	
	Subtotal of Municipalities of Basin		4.137,40	7.549,32	12.531,06
	Subtotal of Municipalities not of Basin		124,44	194,21	313,57
	MRH 271 Alto Rio Negro	TOTAL of MRH	6,77	12,89	24,16
28 Agudos do Sul		0,14	0,37	0,69	
29 Pien		4,22	6,93	12,34	
30 Quitandinha		0,43	0,98	1,89	
31 Tijucas do Sul		1,98	4,61	9,24	
Subtotal of Municipalities of Basin		6,77	12,89	24,16	
Subtotal of Municipalities not of Basin		0,00	0,00	0,00	
MRH 272 Campos da Lapa	TOTAL of MRH	144,48	259,40	461,01	
	32 Campo do Tenente	0,30	0,18	0,23	
	33 Lapa	14,23	18,09	28,49	
	34 Palmeira	0,00	0,00	0,00	
	35 Porto Amazonas	0,88	2,51	4,73	
	36 Rio Negro	108,77	190,81	340,92	
	Subtotal of Municipalities of Basin		124,18	211,59	374,37
Subtotal of Municipalities not of Basin		20,30	47,81	86,64	
MRH 275 Sao Mateus do Sul	TOTAL of MRH	30,25	48,95	91,88	
	46 Antonio Olinto	0,26	0,53	0,85	
	47 Sao Joao do Triunfo	0,46	0,25	0,21	
	48 Sao Mateus do Sul	29,53	48,16	90,82	
Subtotal of Municipalities of Basin		30,25	48,95	91,88	
Subtotal of Municipalities not of Basin		0,00	0,00	0,00	
MRH 276 Colonial Irati	TOTAL of MRH	53,75	102,17	179,22	
	50 Irati	0,00	0,00	0,00	
	51 Mallet	4,19	9,86	17,47	
	53 Reboucas	1,12	2,05	3,09	
	54 Rio Azul	2,08	4,05	7,50	
Subtotal of Municipalities of Basin		7,39	15,96	28,06	
Subtotal of Municipalities not of Basin		46,36	86,21	151,16	
MRH 288 Extremo Oeste Paranaense	TOTAL of MRH	424,10	626,89	850,15	
	269 Boa Vista da Aparecida	0,27	0,35	0,48	
	273 Capita Leonidas Marques	0,58	0,84	1,14	
	274 Caseavel	147,45	171,48	232,55	
	275 Catanduvas	0,41	0,68	0,93	
	276 Ceu Azul	14,74	27,20	36,89	
	282 Foz do Iguaçu	20,18	31,55	42,79	
	284 Guaraniacu	0,58	0,81	1,10	
	285 Ibema	4,16	6,15	8,34	
	290 Lindoeste	0,10	0,15	0,20	
	293 Matelandia	2,25	4,33	5,88	
	294 Medianeira	12,55	23,33	31,64	
	305 Santa Lucia	0,09	0,10	0,14	
	306 Santa Tereza do Oeste	0,36	0,71	0,96	
	307 Santa Terezinha de Itaipu	1,45	1,77	2,40	
309 Sao Miguel do Iguaçu	5,86	7,09	9,61		
313 Tres Barras do Parana	0,55	0,68	0,92		
Subtotal of Municipalities of Basin		211,58	277,24	375,98	
Subtotal of Municipalities not of Basin		212,52	349,65	474,17	

(to be continued)

Table-2.10 (2) Estimated GRDP by Secondary Sector per Municipality in 1993, 2005 and 2015
- Excluding Contribution of Hydroelectric Power Station/Iguaçu River Basin

No. and Name of MRH	No. and Name of Municipality		(Unit: million US\$)			
	No.	Municipality	1993 US\$	2005 US\$	2015 US\$	
MRH 289 Sudoeste Paranaense	TOTAL OF MRH		168,98	400,32	746,02	
	316	Ampere	6,65	12,44	23,19	
	317	Barracao	0,34	0,79	1,47	
	318	Boa Esperanca do Iguacu	0,03	0,06	0,11	
	319	Bom Sucesso do Sul	0,07	0,12	0,22	
	320	Capanema	1,09	2,27	4,23	
	321	Chopininho	2,18	6,28	11,71	
	322	Coronel Vivida	4,23	11,86	22,10	
	323	Cruzeiro do Iguacu	3,43	13,59	25,33	
	324	Dois Vizinhos	45,50	123,23	229,66	
	325	Eneas Marques	0,13	0,30	0,56	
	326	Flor da Serra do Sul	0,07	0,20	0,37	
	327	Francisco Beltrao	73,34	142,24	265,08	
	328	Itapejara do Oeste	2,08	4,04	7,54	
	329	Mariopolis	1,02	2,54	4,73	
	330	Marmeleiro	1,32	4,29	7,99	
	331	Nova Esperanca do Sudoeste	0,06	0,09	0,17	
	332	Nova Prata do Iguacu	0,35	1,14	2,13	
	333	Pato Branco	12,47	41,23	76,84	
	334	Perola do Oeste	0,37	0,83	1,54	
	335	Pinhal Sao Bento	0,02	0,03	0,06	
	336	Planalto	0,40	0,89	1,65	
	337	Pranchita	0,42	1,50	2,80	
	338	Realeza	1,53	4,19	7,80	
	339	Renascerca	1,83	4,62	8,60	
	340	Salgado Filho	0,25	0,58	1,08	
	341	Salto do Lontra	0,29	0,72	1,35	
	342	Santa Izabel do Oeste	0,40	0,79	1,48	
	343	Santo Antonio do Sudoeste	1,28	3,24	6,05	
	344	Sao Joao	0,46	1,00	1,87	
	345	Sao Jorge do Oeste	0,52	1,16	2,16	
	346	Saudade do Iguacu	1,25	2,35	4,37	
	347	Sulina	4,66	9,38	17,49	
	348	Veré	0,40	0,97	1,80	
	349	Vitorino	0,54	1,34	2,50	
		Subtotal of Municipalities of Basin		168,98	400,32	746,02
		Subtotal of Municipalities not of Basin		0,00	0,00	0,00
	MRH 290 Campos de Guarapuava	TOTAL of MRH		180,50	315,38	600,43
		350	Candói	3,84	5,05	9,62
		351	Cantagalo	1,89	4,16	7,92
		352	Guarapuava	99,44	183,56	349,47
		353	Inacio Martins	5,53	8,00	15,23
		354	Laranjeiras do Sul	5,17	8,41	16,00
		355	Nova Laranjeiras	0,78	1,37	2,61
		356	Pinhao	12,78	14,89	28,35
		357	Quedas do Iguacu	24,51	46,82	89,14
		358	Rio Bonito Iguacu	7,75	10,80	20,56
		360	Vimond	0,72	1,29	2,46
			Subtotal of Municipalities of Basin		162,41	284,35
		Subtotal of Municipalities not of Basin		18,09	31,03	59,07
MRH 291 Medio Iguacu		TOTAL of MRH		147,33	260,82	323,05
	361	Bituruna	10,99	24,83	31,88	
	362	Clevelandia	14,72	21,37	17,95	
	363	Cruz Machado	3,35	17,42	24,20	
	364	General Carneiro	9,88	19,67	24,75	
	365	Honorio Serpa	0,30	0,30	0,40	
	366	Mangueirinha	21,92	25,26	34,16	
	367	Palmas	34,95	53,91	71,84	
	368	Paula Freitas	0,30	0,46	0,62	
	369	Paulo Frontin	0,44	0,89	1,14	
	370	Porto Vitoria	0,36	2,03	1,74	
	371	Uniao da Vitoria	50,12	94,66	114,35	
	Subtotal of Municipalities of Basin		147,33	260,82	323,05	
	Subtotal of Municipalities not of Basin		0,00	0,00	0,00	
TOTAL OF THE MUNICIPALITIES OF THE BASIN			4.996,29	9.061,44	15.035,94	

Source: Fundo de Participação dos Municípios-Índices Provisórios-95 (Municipalities Participation Fund-Preliminary Indexes-95)/SEFA

Remark: Values in US\$ were estimated by JICA Team

: Figures of Palmeira/MRH 272 and Irati/MRH 276 are listed in Tibagi River Basin

CHAPTER 3 MASTER PLAN FOR TIBAGI RIVER BASIN

3.1 Regional Unit and Zoning of the Study

According to the regional unit of collected data concerning the socio-economic area, it was decided to use the municipalities as a regional unit. Therefore, the zoning lines for the Study were drawn following the boundary lines of the municipalities. However, as the Study should be made by river basin, it was decided to use the following criteria for inclusion (or exclusion) of municipalities that straddle other river basins, in the zoning of the Study:

- All municipalities that have their urban center located within the river basin, regardless if only a part of the urban area is inside the river basin, were included in the zoning.
- If the urban center of the municipality is not included in this basin, but there is a chance that this municipality will start to use a small river that belongs to this river basin in the future, the municipality is included in the zoning.
- In the case of only a small part of the rural area of the municipality, approximately less than 10% of total area, be included in this river basin, the municipality is excluded of the zoning as, for example, Bela Vista do Paraíso in MRH 281/N. N. Londrina.
- It was considered the recommendation of the Counterpart Team as to the inclusion of municipalities in the zoning, in accordance to the criteria, such as water supply system of undertakers.

The zoning for this river basin is composed of 43 municipalities, and is presented in Figure-3.1.

3.2 Present Socio-Economic Structure

3.2.1 Population per Municipality

Based on the census of 1970, 1980 and 1991, issued by IBGE and provided by IPARDES, the population per Municipality, in each year, of the 43 municipalities that compose the Study's zoning area are shown in Table - 3.3 (1) and Table - 3.3 (2) divided per MRH (Homogeneous Micro-Regions) - refer to data concerning population per MRH (shown in Table - 1.8). It is important to say that some municipalities have been created recently and, therefore, these new municipalities do not have the number of inhabitants included in the table mentioned above.

3.2.2 Gross Regional Domestic Product (GRDP) per Municipality

Based on the estimated GRDP per MRH (shown in Table - 1.12), on the data of Financial Economic Statistics - 74/85, 86/87, 88/89 issued by SEFA and on the Municipalities' Participation Fund - Preliminary Indexes - 95, issued by SEFA, the GRDP of the 43 municipalities from the years of 1981 to 1991 was estimated and is shown in Table - 3.4 (1) and Table - 3.4(2).

3.2.3 GRDP by Secondary Sector per Municipality

GRDP by Secondary Sector per Municipality, during the year of 1981 to 1991, was estimated based on the same data mentioned above, and is presented in Table - 3.5 (1) and Table - 3.5 (2).

3.2.4 Present Socio-Economic Framework

Based on the Population per Municipality in 1980 and 1991 (shown in Table - 3.3 (1) and Table - 3.3 (2)) and GRDP per municipality in 1981 and 1991 (shown in Table - 3.4(1) and Table - 3.4 (2)), the present socio-economic framework of this river basin can be estimated and conceived through the classification of its 43 municipalities into four Categories.

There are two remarkable points, as follows:

- 04 large size municipalities (classified in 1st and 2nd class) had concentrated about 66% and 64% in terms of urban population and GRDP of this river basin in 1980 (or 1981). In 1991, this share was also 66% and 63%, respectively.
- 11 large and medium size municipalities' share in 1980 (or 1981) was of approximately 85% and 85% in terms of urban population and GRDP, respectively, in this river basin. In 1991, this share was also about 85% and 86%, respectively.

The classification of these 43 municipalities with their participation, in percentage, of this river basin's urban population and GRDP in 1980 (or 1981) and 1991 is shown below in Table - 3.1 and Table - 3.2, respectively.

Table - 3.1 Classification of Municipalities Related to Urban Population and GRDP per Municipality in 1980/ Tibagi River Basin

Classification	No. and Name of MRH	No. and Name of Municipality	Urban Population		GRDP per Municipality	
			Population	%	Million US\$	%
1st Class	281/N. N. Londrina	124 Londrina	266,940	29.83	801.47	27.63
2nd Class	273/C. Ponta Grossa	39 Ponta Grossa	172,946	19.33	599.61	20.67
		40 Telêmaco Borba	36,188	4.04	221.46	7.63
		113 Cambé	44,803	5.01	90.09	3.11
		183 Apucarana	67,161	7.51	156.87	5.41
		Subtotal	321,098	35.88	1,068.03	35.82
3rd class	273/C. Ponta Grossa 276/Col. Irati 279/N. V. Jacarezinho 281/N. N. Londrina	37 Castro	25,590	2.86	152.13	5.24
		50 Irati	22,765	2.54	55.78	1.92
		85 Cornélio Procopio	31,802	3.55	132.85	4.58
		109 Arapongas	45,213	5.39	125.08	4.31
		119 Ibitiporã	20,064	2.24	62.39	2.15
		132 Rolândia	26,968	3.01	77.52	2.67
Subtotal	175,402	19.60	605.75	20.88		
4th Class	Other 32 Municipalities	Subtotal	131,438	14.69	425.49	14.67
TOTAL OF MUNICIPALITIES OF BASIN			894,878	100.00	2,900.74	100.00

Remark: GRDP per Municipality is value of 1981
: Million US\$ is US\$

Table - 3.2 Classification of Municipalities Related to Urban Population and GRDP per Municipality in 1991/ Tibagi River Basin

Classification	No. and Name of MRH	No. and Name of Municipality	Urban Population		GRDP per Municipality	
			Population	%	Million US\$	%
1st Class	281/N. N. Londrina	124 Londrina	366,676	30.35	1,078.49	25.94
2nd Class	273/C. Ponta Grossa	39 Ponta Grossa	221,671	18.35	832.50	20.03
		40 Telêmaco Borba	54,649	4.52	313.10	7.53
		113 Cambé	66,817	5.53	169.79	4.08
		183 Apucarana	86,079	7.12	205.91	4.95
		Subtotal	429,216	35.52	1,521.30	36.60
3rd class	273/C. Ponta Grossa 276/Col. Irati 279/N. V. Jacarezinho 281/N. N. Londrina	37 Castro	39,125	3.24	298.71	7.19
		50 Irati	31,278	2.59	81.21	1.95
		85 Cornélio Procopio	40,036	3.31	142.63	3.43
		109 Arapongas	60,025	4.97	244.20	5.87
		119 Ibitiporã	30,728	2.54	68.52	1.65
		132 Rolândia	35,276	2.92	134.44	3.23
Subtotal	235,468	19.57	969.71	23.33		
4th Class	Other 32 Municipalities	Subtotal	175,954	14.56	587.34	14.13
TOTAL OF MUNICIPALITIES OF BASIN			1,209,314	100.00	4,156.84	100.00

Remark: GRDP per Municipality not including contribution of Hydroelectric Power Stations
: Million US\$ is US\$

Municipalities in the Tibagi River Basin

No. and Name of MDA	No.	Name	Urban Area
MRH 272	34	Palmeira	Y
Campos de Lapa	35	Povo Annonias	N
MRH 273	37	Centro	Y
Campos de Ponte Grossa	38	Fazil do Sol	Y
	39	Ponte Grossa	Y
	40	Talassio Barba	Y
	41	Tibagi	Y
	42	Valeão	N
MRH 276	49	Imbituva	Y
Col. Itaipu	50	Itaipu	Y
	55	Tucuruvi Soares	Y
MRH 277	57	Ipiporanga	Y
Alm. Itaipu	58	Itaipu	N
	59	Ortigoinha	Y
	60	Reserva	Y
MRH 278	63	Camões	Y
N. V. Wenceslao Benz	75	Sapopema	Y
MRH 279	84	Congonhal	Y
N. V. Jussaraclério	85	Camacho Procelpio	P
	89	Ludópolis	N
	90	N. América Colina	Y
	91	Novos Fátima	N
	92	S. Amélia Paraiso	Y
	93	Santa Rosa	Y
MRH 280	99	Atalaia	Y
Associação de Atalaia	100	Jesuítas	Y
	101	N. Santa Bárbara	Y
	102	Rancho Alegre	Y
	103	Santa Cecília Perito	Y
	104	São Jerônimo Serra	Y
	105	S. Sebastião Anunciada	Y
	106	Urutí	Y
MRH 281	109	Araraquã	P
N. N. Londrina	113	Camé	P
	119	Itaiporã	Y
	124	Londrina	Y
	131	Provenço de Mato	Y
	132	Roldão	N
	137	Serra do Pato	N
MRH 284	184	Apucarana	P
N. N. Apucarana	187	Carifúma	Y
	198	Paraitinga do Sol	N
	200	Mauá da Serra	P

Source : IPARDES

Remark : Urban Area

Y : Urban Area in the River Basin

P : Part of the Urban Area in River Basin

N : Urban Area not included in the River Basin

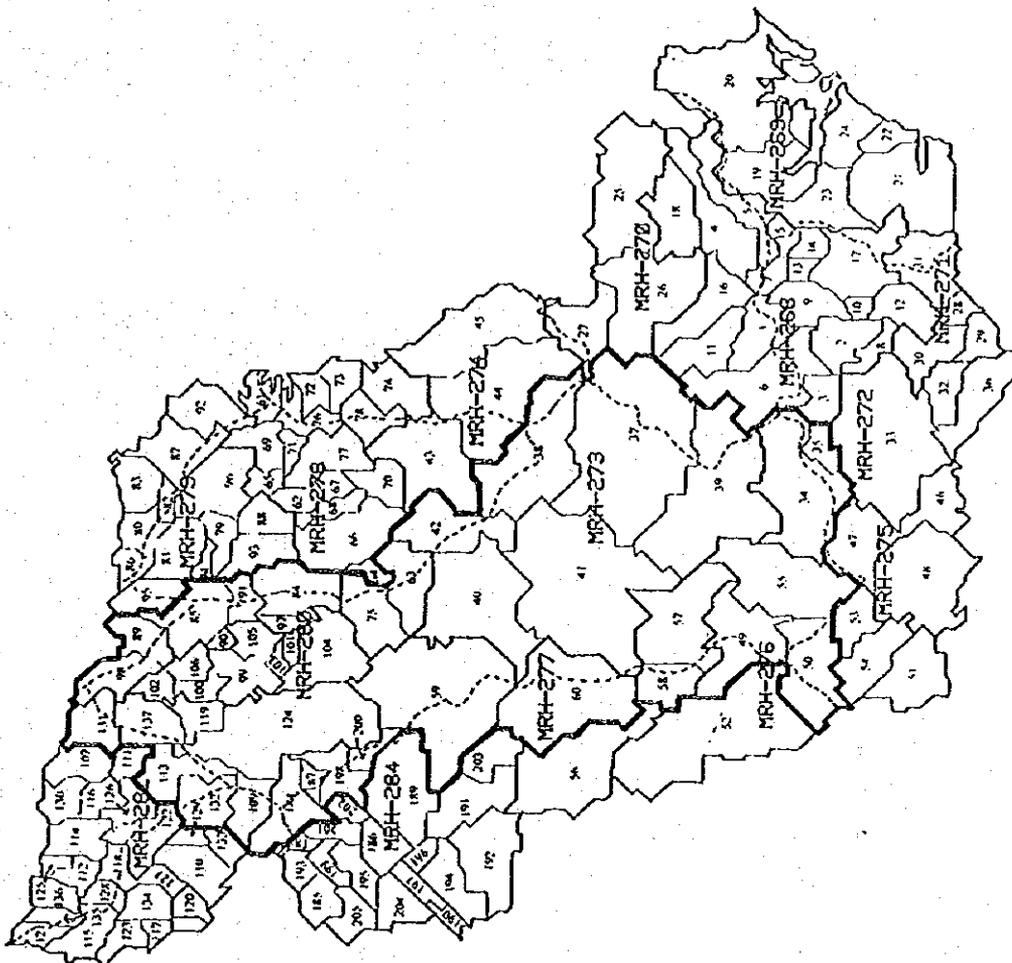


Figure - 3.1 Zoning of the Study/Tibagi River Basin

Table - 3.3 (1) Population per Municipality in 1970, 1980 and 1991 / Tibagi River Basin

No. and Name of Municipality	Population 1970			Population 1980			Population 1991		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
MRH 272 Campos de Lapa	34,492	43,417	77,909	44,843	42,862	87,705	58,986	45,345	104,331
TOTAL of MRH	8,129	11,901	20,030	11,672	12,563	24,235	14,378	14,168	28,546
34 Palmeira	0	0	0	0	0	0	0	0	0
35 Porto Amazonas	8,129	11,901	20,030	11,672	12,563	24,235	14,378	14,168	28,546
Subtotal of Municipalities of Basin	26,363	31,216	57,579	33,171	30,299	63,470	44,108	31,177	75,285
Subtotal of Municipalities not of Basin	159,410	77,703	237,113	249,833	78,883	328,716	338,225	66,953	405,178
MRH 273 Campos de Ponta Grossa	12,919	24,617	37,536	25,590	24,226	49,816	39,125	24,938	64,063
37 Castro	7,156	9,857	17,013	9,463	7,613	17,076	12,314	7,100	19,414
38 Pira do Sul	113,074	13,866	126,940	172,946	13,701	186,647	221,671	12,313	233,984
39 Ponta Grossa	22,813	14,425	37,238	36,188	18,389	54,577	54,649	10,314	64,963
40 Telmaco Borba	3,448	16,938	20,386	5,646	14,954	20,600	10,466	12,293	22,759
41 Tibagi	159,410	77,703	237,113	249,833	78,883	328,716	338,225	66,953	405,178
42 Venâncio	0	0	0	0	0	0	0	0	0
Subtotal of Municipalities of Basin	36,598	98,139	134,737	49,976	98,491	148,467	69,230	102,442	171,672
Subtotal of Municipalities not of Basin	4,598	15,734	20,332	5,791	16,194	21,985	7,874	17,747	25,621
MRH 276 Col. Itati	15,809	20,662	36,471	22,765	19,469	42,234	31,278	16,576	47,854
49 Ibititua	2,589	10,290	12,879	3,076	9,815	12,891	4,556	9,465	14,021
50 Itati	22,596	46,686	69,282	31,632	45,478	77,110	43,708	43,788	87,496
55 Teixeira Soares	15,602	51,473	67,075	18,344	53,013	71,357	25,522	58,654	84,176
Subtotal of Municipalities of Basin	7,733	84,950	92,683	14,839	97,939	112,798	22,734	75,305	98,039
Subtotal of Municipalities not of Basin	1,754	7,689	9,443	2,192	7,894	10,086	3,214	9,376	12,590
MRH 277 Alto Ivaí	1,029	9,078	10,107	1,741	8,769	10,510	2,958	8,496	11,454
57 Piranga	1,754	34,935	36,689	4,552	45,561	50,113	5,412	22,092	27,504
58 Ivaí	2,212	18,705	20,917	4,047	19,556	23,603	7,192	17,892	25,084
59 Ortigueira	6,749	70,487	77,236	12,532	81,780	94,312	18,776	57,856	76,632
60 Reserva	984	13,563	14,547	2,307	16,179	18,486	3,958	17,649	21,607
Subtotal of Municipalities of Basin	43,784	154,817	200,601	65,574	119,824	185,398	92,920	76,431	169,351
Subtotal of Municipalities not of Basin	1,313	16,411	17,724	3,112	14,346	17,458	3,989	6,514	10,503
MRH 278 N. V. Wenceslau Braz	796	7,826	8,622	1,517	6,900	8,417	2,861	4,234	7,095
63 Curitiba	2,109	24,257	26,366	6,629	21,446	28,075	6,850	10,748	17,598
75 Sapopema	43,675	130,580	174,255	58,945	98,578	157,523	86,070	65,683	151,753
Subtotal of Municipalities of Basin	134,767	234,191	368,958	169,539	332,989	502,528	216,130	91,437	307,567
Subtotal of Municipalities not of Basin	3,165	15,307	18,472	2,743	3,567	6,310	4,044	3,729	7,773
MRH 279 N. V. Jacarezinho	25,827	23,969	49,796	31,802	10,779	42,581	40,036	6,608	46,644
84 Congonhinhas	1,138	10,883	12,021	1,559	3,624	5,183	2,248	2,513	4,761
85 Comélio Procópio	975	5,916	6,891	1,333	3,142	4,475	1,828	2,777	4,105
89 Leopoldina	3,513	8,990	12,503	4,723	3,475	8,198	5,979	2,406	8,385
90 N. América Colina	1,017	6,115	7,132	1,069	2,303	3,372	1,206	1,282	2,488
91 Nova Fátima	3,582	10,713	14,295	4,112	2,814	6,926	4,880	1,828	6,708
97 S. Antônio Paraíso	39,217	81,893	121,110	47,343	31,704	79,047	60,221	20,543	80,864
98 Sertaneja	95,550	172,298	267,848	122,246	101,285	223,531	155,909	70,794	226,703
Subtotal of Municipalities of Basin	95,550	172,298	267,848	122,246	101,285	223,531	155,909	70,794	226,703
Subtotal of Municipalities not of Basin	0	0	0	0	0	0	0	0	0

(To be continued)

Table - 3.3 (2). Population per Municipality in 1970, 1980 and 1991 / Tibagi River Basin

No. and Name of Municipality		Population 1970			Population 1980			Population 1991		
		Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
MRH 280										
	Algodoeira de Assai	28,255	88,143	116,398	35,990	47,713	83,703	47,969	30,452	78,421
	99 Assai	8,567	20,523	29,090	10,124	11,972	22,096	12,964	7,361	20,325
	100 Juaizinho	4,239	6,587	10,826	6,646	2,912	9,558	8,390	2,038	10,428
	101 N. Santa Bárbara	---	---	---	---	---	---	---	---	---
	102 Rancho Alegre	1,942	5,557	7,499	2,355	2,525	4,880	3,264	1,245	4,509
	103 Santa Cecília Pavão	2,980	10,333	13,313	4,198	5,668	9,866	4,748	3,894	8,642
	104 São Jerônimo Serra	2,057	22,403	24,460	2,974	13,415	16,389	4,892	8,383	13,275
	105 S. Sebastião Amoreira	1,803	11,006	12,809	2,579	4,356	6,935	4,516	3,427	7,943
	106 Uraí	6,667	11,734	18,401	7,114	6,865	13,979	9,195	4,104	13,299
	Subtotal of Municipalities of Basin	28,255	88,143	116,398	35,990	47,713	83,703	47,969	30,452	78,421
	Subtotal of Municipalities not of Basin	0	0	0	0	0	0	0	0	0
MRH 281										
	N. N. Londrina	333,024	351,924	684,948	527,638	177,793	705,431	713,505	103,335	816,840
	109 Arapongas	36,609	14,601	51,210	48,213	6,455	54,668	60,025	4,531	64,556
	113 Cambé	13,510	22,111	35,621	44,803	9,053	53,856	66,817	7,025	73,842
	119 Tibopê	12,999	14,194	27,193	20,064	7,560	27,624	30,728	4,440	35,168
	124 Londrina	163,528	64,573	228,101	266,940	34,771	301,711	366,676	23,424	390,100
	131 Primeiro de Maio	6,076	19,662	25,738	7,913	5,301	13,214	9,773	2,137	11,910
	132 Rolândia	20,845	27,119	47,964	26,968	14,484	41,452	35,276	8,500	43,776
	137 Sertãozinho	5,887	15,990	21,877	7,970	8,510	16,480	9,998	4,293	14,291
	Subtotal of Municipalities of Basin	259,454	178,250	437,704	422,871	86,134	509,005	579,293	54,350	633,643
	Subtotal of Municipalities not of Basin	73,570	173,674	247,244	104,767	91,659	196,426	134,212	48,985	183,197
MRH 284										
	N. N. Apucarana	110,531	351,354	461,885	169,930	211,157	381,087	210,412	115,301	325,713
	184 Apucarana	43,573	25,729	69,302	67,161	13,084	80,245	86,079	8,985	95,064
	187 Califórnia	2,999	8,563	11,562	3,405	4,680	8,085	4,525	2,804	7,329
	198 Mariândia do Sul	2,865	19,084	21,949	5,810	8,102	13,912	7,790	5,974	13,764
	200 Mauá da Serra	---	---	---	---	---	---	---	---	---
	Subtotal of Municipalities of Basin	49,437	53,376	102,813	76,376	25,866	102,242	98,394	17,763	116,157
	Subtotal of Municipalities not of Basin	61,094	297,978	359,072	93,554	185,291	278,845	112,018	97,538	209,556
	TOTAL OF MUNICIPALITIES OF THE BASIN	575,756	632,676	1,208,432	894,878	431,567	1,326,445	1,208,314	316,721	1,525,035

Source: Census of 1970, 1980 and 1991 / IBGE, IPARDES

Remark: Municipalities without number of population had not been created until the respective year

Figures of Porto Amazonas/MRH 272 are listed in Iguçu River Basin

Table - 3.4 (1) GRDP per Municipality in 1981, 1985, 1987, 1989 and 1991 / Tibagi River Basin

No. and Name of MRH	No. and Name of Municipality	YEAR												
		1981		1983		1985		1987		1989		1991		
		%	US\$x10**6	% Estado	% / MRH	US\$x10**6								
MRH 272	Campos da Lapa	100.00	164.30	100.00	187.40	100.00	214.50	100.00	271.50	100.00	399.48	1.08390	100.00	273.41
	34 Palmera	30.14	49.52	25.28	38.22	28.95	54.26	34.25	75.46	23.49	69.19	0.29083	16.83	75.36
	35 Porto Amazonas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00000	0.00	0.00
	Subtotal of Municipalities of Basin	30.14	49.52	25.28	38.22	28.95	54.26	34.25	75.46	23.49	69.19	0.29083	16.83	75.36
	Subtotal of Municipalities not of Basin	69.86	114.78	74.72	112.98	71.05	133.14	65.75	141.04	74.51	202.31	0.79307	73.17	200.05
MRH 273	Campos Ponta Grossa	100.00	1,040.70	100.00	1,177.80	100.00	1,208.80	100.00	1,516.20	100.00	1,719.50	6.09795	100.00	1,538.21
	37 Castro	14.62	152.13	15.67	160.98	15.11	182.70	15.59	236.34	18.00	309.48	1.18418	194.42	298.77
	38 Pirai do Sul	2.78	28.91	1.85	21.82	2.96	35.75	3.15	47.73	3.03	52.08	0.18115	2.97	45.70
	39 Ponta Grossa	57.62	599.61	63.94	753.10	56.72	685.59	51.39	779.18	51.82	890.86	3.30030	54.12	832.50
	40 Telemaco Borba	21.28	221.46	17.54	206.57	20.85	252.02	25.64	388.76	23.66	406.81	1.24121	20.35	313.10
	41 Tibagi	3.71	38.60	3.00	35.32	4.36	52.74	4.23	64.20	3.49	66.06	0.13012	2.13	32.82
	42 Venâncio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06999	1.00	15.38
	Subtotal of Municipalities of Basin	100.00	1,040.70	100.00	1,177.80	100.00	1,208.80	100.00	1,516.20	100.00	1,719.50	6.09795	100.00	1,538.21
	Subtotal of Municipalities not of Basin	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00000	0.00	0.00
MRH 276	Col. Irati	100.00	126.70	100.00	111.70	100.00	160.90	100.00	173.20	100.00	197.70	0.79235	100.00	199.87
	49 Ambotiva	12.01	15.22	12.79	14.28	12.67	20.38	12.96	22.45	10.98	21.71	0.09247	11.67	23.33
	50 Irati	44.03	55.78	39.24	43.83	37.65	60.58	38.26	66.26	44.18	87.35	0.32196	40.63	81.21
	55 Teixeira Soares	9.87	12.50	7.88	8.80	12.15	19.54	10.74	18.60	9.51	18.80	0.08750	11.04	22.07
	Subtotal of Municipalities of Basin	65.90	85.30	59.90	66.91	62.46	100.51	61.96	107.32	64.67	127.86	0.50193	63.35	126.61
	Subtotal of Municipalities not of Basin	34.10	41.40	40.10	44.79	37.54	60.39	38.04	65.88	35.33	69.84	0.29042	36.65	73.26
MRH 277	Alto Ivaí	100.00	36.20	100.00	29.70	100.00	53.70	100.00	39.50	100.00	46.90	0.17272	100.00	43.57
	57 Ipiranga	15.60	5.65	15.27	4.53	22.41	12.05	23.19	9.16	17.17	8.05	0.04526	26.20	11.42
	58 Ivaí	16.54	5.99	15.93	4.73	16.13	8.66	20.59	8.13	15.14	7.10	0.02959	17.13	7.46
	59 Ortigueira	28.27	10.23	31.63	9.39	26.91	14.45	19.63	7.76	30.35	14.23	0.02898	16.78	7.31
	60 Reserva	25.36	9.18	20.78	6.17	19.17	10.29	17.56	6.94	21.45	10.06	0.03202	18.54	8.08
	Subtotal of Municipalities of Basin	85.77	31.05	83.61	24.83	84.61	45.43	80.98	31.99	84.11	39.45	0.15385	78.65	34.27
	Subtotal of Municipalities not of Basin	14.23	5.15	16.39	4.87	15.39	8.27	19.02	7.51	15.89	7.45	0.03687	21.35	9.30
MRH 278	N. V. Wenceslau Braz	100.00	132.70	100.00	103.70	100.00	143.40	100.00	142.00	100.00	141.90	0.55211	100.00	139.27
	63 Curitiba	4.62	6.13	3.61	3.75	3.92	5.62	3.73	5.29	3.42	4.86	0.01616	2.93	4.08
	75 Sapopema	1.78	2.36	1.70	1.76	2.50	3.58	1.87	2.66	3.75	5.32	0.02627	4.76	6.63
	Subtotal of Municipalities of Basin	6.40	8.49	5.31	5.51	6.41	9.20	5.60	7.96	7.17	10.17	0.04243	7.69	10.70
	Subtotal of Municipalities not of Basin	93.60	124.21	94.69	98.19	93.59	134.20	94.40	134.04	92.83	131.73	0.50968	92.31	128.57
MRH 279	N. V. Jacarezinho	100.00	595.50	100.00	603.30	100.00	884.70	100.00	800.30	100.00	795.60	2.68494	100.00	677.28
	84 Congonhinhas	0.75	4.37	0.74	4.46	1.31	11.61	1.27	10.18	0.75	5.99	0.02380	0.89	6.00
	85 Comêdio Proçópio	22.31	132.85	19.64	118.50	23.28	206.00	18.43	147.53	22.67	180.34	0.56545	21.06	142.63
	89 Leopoldis	2.61	15.56	2.83	17.09	3.45	30.49	2.21	17.65	2.99	23.80	0.06772	2.52	17.08
	90 N. América Colina	0.88	5.23	1.43	8.64	1.93	17.07	1.31	11.17	1.31	10.45	0.05098	1.15	7.81
	91 Nova Fátima	1.84	10.97	1.38	8.33	1.54	13.61	1.52	12.20	1.65	13.16	0.04858	1.81	12.25
	97 S. Antônio Paraíso	0.70	4.19	0.77	4.63	0.64	4.63	0.60	4.84	0.62	4.97	0.01930	0.72	4.87
	98 Sertaneja	5.72	34.07	6.19	37.32	5.17	45.75	4.27	34.16	4.60	36.57	0.12772	4.76	32.22
	Subtotal of Municipalities of Basin	34.80	207.24	32.98	198.95	37.32	350.18	29.70	237.72	34.60	275.28	0.88355	32.91	222.88
	Subtotal of Municipalities not of Basin	65.20	388.26	67.02	404.35	62.68	534.52	70.30	562.58	65.40	520.32	1.80139	67.09	454.40

(to be continued)

Table - 3.4 (2) GRDP per Municipality in 1981, 1983, 1985, 1987, 1989 and 1991 / Tibagi River Basin

(Continuation)

No. and Name of MRH	No. and Name of Municipality	YEAR											
		1981		1983		1985		1987		1989		1991	
		%	US\$ x 10 ^{**6}										
MRH 280	Algodoeira de Assaí	100.00	158.10	100.00	160.90	100.00	219.40	100.00	202.90	100.00	208.00	100.00	140.24
	TOTAL of MRH	44.98	71.11	42.30	68.87	33.29	73.03	40.43	84.04	45.13	93.88	0.27193	48.91
	100 Jataizinho	18.26	28.87	19.52	31.42	24.30	53.31	18.98	38.51	4.84	10.07	0.06220	11.19
	101 N. Santa Bárbara	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01442	3.64
	102 Rancho Alegre	7.61	12.04	7.57	12.18	10.91	23.93	7.99	16.20	17.52	36.45	0.06504	11.70
	103 Santa Cecília Pavão	6.67	10.54	5.54	8.92	5.42	11.89	5.81	11.78	5.14	10.70	0.02269	4.08
	104 São Jerônimo Serra	5.81	9.19	4.71	7.59	6.94	15.22	5.42	10.99	3.65	7.57	0.02513	4.52
	105 S. Sebastião Amoreira	6.68	10.55	6.78	10.90	5.95	13.05	7.29	14.79	8.30	17.28	0.04111	7.39
	106 Uraí	9.99	15.79	13.07	21.03	13.20	28.96	14.09	28.59	15.41	32.06	0.05345	9.61
	Subtotal of Municipalities of Basin	100.00	158.10	100.00	160.90	100.00	219.40	100.00	202.90	100.00	208.00	0.53597	140.24
	Subtotal of Municipalities not of Basin	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00000	0.00
MRH 281	N. N. Londrina	100.00	1,531.50	100.00	1,781.30	100.00	2,594.00	100.00	2,359.90	100.00	2,232.60	8.65165	2,182.38
	TOTAL of MRH	8.06	123.08	7.66	136.43	6.87	178.21	9.75	229.98	7.24	163.11	0.96809	11.19
	109 Arapongas	5.81	90.09	11.17	198.98	5.99	155.46	6.20	146.39	7.66	172.65	0.67311	7.78
	113 Cambé	4.02	62.39	3.77	67.23	2.59	67.13	3.77	88.86	2.58	58.01	0.27165	3.14
	119 Ibipora	51.66	801.47	48.56	864.99	53.60	1,390.31	51.09	1,205.57	46.91	1,056.75	4.27549	49.42
	124 Londrina	2.05	31.82	1.71	30.51	1.65	42.82	1.09	25.61	1.37	30.77	0.12923	1.49
	131 Primeiro de Maio	5.00	77.52	5.10	90.89	5.99	155.46	5.88	138.71	6.90	155.52	0.53295	6.16
	132 Rolândia	2.48	38.54	2.02	36.06	2.14	55.46	1.56	36.90	1.99	44.74	0.15870	1.83
	137 Sertãozinho	79.08	1,226.92	80.00	1,425.10	78.83	2,044.86	79.33	1,872.01	74.65	1,681.56	7.00922	81.02
	Subtotal of Municipalities of Basin	20.92	324.58	20.00	356.20	21.17	549.14	20.67	487.89	25.35	571.04	1.64243	18.98
	Subtotal of Municipalities not of Basin	100.00	464.40	100.00	423.60	692.70	692.70	100.00	597.90	100.00	632.20	2.02660	100.00
MRH 284	N. N. Apucarana	33.78	136.87	33.86	144.09	44.70	309.63	38.13	227.95	43.36	274.10	0.81628	40.28
	TOTAL of MRH	1.18	5.49	1.16	4.93	0.98	6.76	1.07	6.38	1.71	10.80	0.02262	1.12
	187 Califórnia	4.92	22.86	7.04	29.98	4.45	30.81	7.93	47.40	5.09	32.20	0.04318	2.13
	198 Marilândia do Sul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07923	3.91
	200 Mauá da Serra	39.88	185.21	42.06	178.99	50.12	347.20	47.12	281.73	50.16	317.10	0.96131	47.43
	Subtotal of Municipalities of Basin	60.12	279.19	57.94	246.61	49.88	345.50	52.88	316.17	49.84	315.10	1.06529	32.57
	Subtotal of Municipalities not of Basin	2.990.74	3,277.21	4,359.83	4,447.92	4,156.84	4,156.84	4,156.84	4,156.84	4,156.84	4,156.84	4,156.84	4,156.84
	TOTAL OF MUNICIPALITIES OF THE BASIN												

Source : Estatística Econômica Financeira (Finance Economic Statistics) 74/85, 86/87, 88/89 - SEFA; Fundo de Participação dos Municípios-Índices Provisórios-95 (Municipalities' Participation Fund-Preliminary Indexes - 95) - SEFA

Remark : US\$ x 10^{**6} means million US\$

: Figures of Porto Amazonas/MRH 272 are listed in Iguacu River Basin

: In the figures of 1989 and 1991 was included the value added of contribution of Hydroelectric Power Stations

Table - 3.5 (1) GRDP by Secondary Sector per Municipality in 1981, 1983, 1985, 1987, 1989 and 1991/Tibagi River Basin

MRH	No. and Name of Municipality	YEAR											
		1981		1983		1985		1987		1989		1991	
		%	US\$x10**6										
MRH 272 Campos da Lapa	TOTAL of MRH	100.00	60.1	100.00	55.20	100.00	60.5	100.00	57.6	100.00	80.9	100.00	85.28
	34 Palmeira	14.06	8.45	10.87	6.00	14.08	8.52	21.33	12.3	19.52	15.8	20.89	17.81
	35 Porto Amazonas	0.00	0	0.00	0.00	0.00	0	0.00	0	0.00	0	0.00	0.00
	Subtotal of Municipalities of Basin	14.06	8.45	10.87	6.00	14.08	8.52	21.33	12.3	19.52	15.8	20.89	17.81
	Subtotal of Municipalities not of Basin	85.94	51.65	89.13	49.20	85.92	51.98	78.67	45.3	80.48	65.1	79.11	67.47
MRH 273 C. Ponta Grossa	TOTAL of MRH	100.00	428.9	100.00	479.1	100.00	460.2	100.00	433.2	100.00	577.6	100.00	531.07
	37 Casero	5.10	21.86	5.18	24.81	7.91	36.41	9.88	42.3	11.76	67.95	13.64	72.42
	38 Pirai do Sul	1.92	8.23	0.50	2.39	2.10	9.69	2.59	11.2	2.75	15.87	2.34	12.40
	39 Ponta Grossa	61.90	265.47	68.90	330.08	59.03	271.64	47.51	205.8	55.32	319.53	58.92	312.93
	40 Telmaco Borba	30.98	132.86	25.32	121.32	30.86	142.03	39.90	172.9	30.02	173.42	24.90	132.23
MRH 276 Col. Irati	TOTAL of MRH	100.00	428.9	100.00	479.1	100.00	460.2	100.00	433.2	100.00	577.6	100.00	531.07
	49 Ibituva	10.45	2.58	9.78	2.55	8.32	2.24	12.33	4.02	9.63	3.78	9.73	4.00
	50 Irati	46.81	11.56	45.22	10.76	52.47	14.12	44.80	14.6	52.57	20.61	56.77	23.32
	55 Teixeira Soares	9.20	2.27	7.56	1.80	7.43	2.00	4.07	1.33	3.23	1.26	2.79	1.15
	Subtotal of Municipalities of Basin	66.46	16.42	62.56	14.89	68.23	18.35	61.20	19.95	65.43	25.65	69.29	28.46
MRH 277 Alto Ivai	TOTAL of MRH	100.00	1.60	100.00	1.50	100.00	1.90	100.00	1.70	100.00	2.50	100.00	3.43
	57 Ipiranga	14.37	0.23	6.16	0.09	6.35	0.12	6.18	0.11	2.30	0.06	5.09	0.20
	58 Ivai	56.52	0.90	59.82	0.90	63.86	1.21	69.93	1.19	65.72	1.64	35.09	1.20
	59 Origueira	17.85	0.29	24.09	0.36	20.2	0.38	10.15	0.17	16.31	0.41	18.23	0.63
	60 Reserva	0.66	0.01	1.42	0.02	2.22	0.04	2.98	0.05	4.70	0.12	8.03	0.28
MRH 278 N.V. Wenceslau B.	TOTAL of MRH	100.00	3.90	100.00	3.40	100.00	10.60	100.00	5.90	100.00	11.50	100.00	23.91
	63 Curitiba	3.40	0.13	2.69	0.09	1.71	0.18	1.39	0.08	1.97	0.23	0.84	0.15
	75 Sapopema	3.26	0.13	2.01	0.07	0.97	0.10	2.62	0.15	1.45	0.17	0.99	0.24
	Subtotal of Municipalities of Basin	6.66	0.26	4.70	0.16	2.68	0.28	4.01	0.23	3.42	0.40	1.63	0.39
	Subtotal of Municipalities not of Basin	93.34	3.64	95.30	3.24	97.32	10.32	95.99	5.66	96.58	11.10	98.38	23.52
MRH 279 N.V. Jecareizinho	TOTAL of MRH	100.00	110.50	100.00	116.30	100.00	147.10	100.00	137.80	100.00	145.8	100.00	147.01
	84 Congonhinhas	0.03	0.04	0.02	0.03	0.06	0.08	0.12	0.16	0.22	0.34	0.25	
	85 Comcio Procopio	37.27	41.18	34.85	40.53	32.00	47.07	24.2	33.35	30.15	43.95	28.61	42.06
	89 Leopoldis	0.01	0.02	0.02	0.02	0.02	0.03	0.03	0.04	0.02	0.02	1.27	1.87
	90 N. America Colina	0	0	0.93	1.08	0.76	1.11	1.03	1.43	1.32	1.92	0.72	1.05
MRH 279 N.V. Jecareizinho	TOTAL of MRH	100.00	110.50	100.00	116.30	100.00	147.10	100.00	137.80	100.00	145.8	100.00	147.01
	91 Nova Estima	0.46	0.50	0.22	0.26	0.24	0.36	0.24	0.33	0.18	0.26	0.35	0.52
	97 S. Antonio Paraiso	0.01	0.01	0.01	0.01	0	0	0.01	0	0.01	0	0.01	0.02
	98 Serranceja	0.11	0.13	0.03	0.03	0.01	0.02	0.02	0.02	0.08	0.12	6.54	9.61
	Subtotal of Municipalities of Basin	37.9	41.88	36.07	41.95	33.09	48.68	25.64	35.35	31.96	46.6	37.73	55.47
Subtotal of Municipalities not of Basin	62.1	68.62	63.93	74.35	66.91	98.42	74.36	102.47	68.04	99.2	62.27	91.54	

(16 to be continued)

Table - 3.5 (2) GRDP by Secondary Sector per Municipality in 1981, 1983, 1985, 1987, 1989 and 1991/Tibagi River Basin

(Continuation)

No. and Name of MRH	No. of MRH Municipality	YEAR											
		1981		1983		1985		1987		1989		1991	
		%	US\$ x 10 ⁶	%	US\$ x 10 ⁶	%	US\$ x 10 ⁶	%	US\$ x 10 ⁶	%	US\$ x 10 ⁶	%	US\$ x 10 ⁶
MRH 280	TOTAL of MRH	100.00	32.96	100.00	38.40	100.00	38.8	100.00	39.3	100.00	24.2	100.00	35.19
Alg. Assai	99 Assai	59.23	19.49	57.38	22.11	49.78	19.32	55.28	21.72	77.99	18.87	70.76	24.91
	100 Jataizinho	34.88	11.48	33.37	12.81	41.72	16.19	36.67	14.41	1.32	0.32	13.15	4.63
	101 Nova Santa Barbara	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.02
	102 Rancho Alegre	0.02	0.01	0.02	0.01	0.05	0.02	0.04	0.02	1.64	0.4	8.53	3.00
	103 Santa Cecília Pavão	0.01	0.00	0.02	0.01	0.02	0.01	0.03	0.01	6.47	1.57	2.98	1.05
	104 São Jerônimo Serra	0.27	0.09	0.26	0.10	0.11	0.04	0.10	0.04	0.31	0.08	0.35	0.12
	105 S. Sebastião Amoreira	0.42	0.14	0.12	0.05	0.03	0.01	0.05	0.02	0.38	0.09	0.36	0.13
	106 Ural	5.17	1.70	3.63	3.31	8.28	3.21	7.83	3.08	11.89	2.88	3.80	1.34
	Subtotal of Municipalities of Basin	100.00	32.9	100.00	38.4	100.00	38.8	100.00	39.3	100.00	24.2	100.00	35.19
	Subtotal of Municipalities not of Basin	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MRH 281	TOTAL of MRH	100.00	396.00	100.00	469.80	100.00	594.00	100.00	516.20	100.00	480	100.00	580.72
N.N. Londrina	109 Apucarana	9.43	37.33	9.11	42.82	9.57	56.87	11.40	58.83	4.00	19.22	14.15	82.15
	113 Cambé	9.50	37.62	20.42	95.94	10.55	62.65	9.44	48.72	12.73	61.12	10.90	63.31
	119 Ipirati	4.09	16.19	2.51	11.81	0.67	4.01	2.11	10.90	3.16	15.16	3.49	20.29
	124 Londrina	56.08	222.06	51.23	240.68	56.17	333.66	52.16	269.24	49.78	238.96	45.78	265.87
	131 Prineiro de Maio	0.04	0.17	0.02	0.08	0.04	0.27	0.03	0.16	0.05	0.23	1.63	9.48
	132 Rolândia	5.85	23.18	4.92	23.11	4.76	28.30	6.42	33.13	7.74	37.15	7.43	43.17
	137 Sertãozinho	0.13	0.51	0.12	0.56	0.07	0.44	0.15	0.75	0.37	1.76	0.96	5.60
	Subtotal of Municipalities of Basin	85.12	337.07	88.34	413	81.85	486.2	81.70	421.73	77.83	373.6	84.36	489.87
	Subtotal of Municipalities not of Basin	14.88	58.93	11.66	54.8	18.15	107.8	18.50	94.47	22.17	106.4	15.64	90.85
MRH 284	TOTAL of MRH	100.00	72.10	100.00	73.60	100.00	116.00	100.00	111.80	100.00	133.70	100.00	111.30
N.N. Apucarana	184 Apucarana	71.46	51.50	65.02	47.85	67.25	78.01	56.41	63.07	65.85	88.05	58.29	64.88
	187 Califórnia	0.37	0.30	0.15	0.11	0.22	0.26	0.27	0.30	0.54	0.72	0.67	0.74
	198 Marilândia do Sul	5.87	4.20	6.97	5.13	4.02	4.67	7.54	8.43	4.34	5.80	0.32	0.35
	200 Mauá da Serra	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Subtotal of Municipalities of Basin	77.69	56.00	72.13	53.09	71.50	82.94	64.22	71.80	70.73	94.57	62.67	69.76
	Subtotal of Municipalities not of Basin	22.31	16.10	27.87	20.51	28.50	33.06	35.78	40.00	29.27	39.13	37.33	41.54
	TOTAL OF MUNICIPALITIES OF THE BASIN	923.31	1,049.96	1,143.73	1,035.36	1,160.65	1,230.33						

Source : Estatística Econômica Financeira (Finance Economic Statistics) 74/85, 86/87, 88/89 - SEFA; Fundo de Participação dos Municípios - Índices Provisórios - 95 (Municipalities' Participation Fund - Preliminary Indexes - 95) - SEFA

Remark : US\$ x 10⁶ means million US\$

: Figures of Porto Amazonas/MRH 272 are listed in Iguçu River Basin

: In the figures of 1989 and 1991 was included the value added of contribution of Hydroelectric Power Stations