

## 2.5.2 Existing Bridge Condition

### (1) General

The data of present bridge condition in the Study Area is registered on the database of Bina Marga Bridge Management System (BMS). Information on the following items can be obtained from the bridge inventory based on BMS.

- Road link number;
- Bridge name;
- Location (distance from a main city);
- Length, span, and width of bridges;
- Type of superstructure;
- Year of construction; and
- Degree of damage.

Bridge conditions in the Study Area are shown in Table 2-5-4 and Figures 2-5-4 to 2-5-7.

**Table 2-5-4 Existing Bridges along the National and Provincial Roads in the Central and South-east Sulawesi**

Province	Central Sulawesi		South-east Sulawesi	
Road Classification	National Road	Provincial Road	National Road	Provincial Road
Number of Bridges	708	1,026	238	501
	1,734		739	
Total Length (m)	11,904	14,984	3,057	6,686
	26,888		9,743	
Width (m)	3.0 - 9.9	3.0 - 9.0	3.0 - 12.0	3.0 - 7.5
Road Length (km)	1,606	1,523	304	1,452
	3,129		1,756	
Bridge Length Road Length (%)	0.74	0.98	1.01	0.46
	0.86		0.55	

Source: Bina Marga

## **(2) Overview of Existing Bridges in the Study Area**

There are a total of 1,734 existing bridges (total length about 27 km) in Central Sulawesi, and a total of 739 bridges (total length of about 10 km) in Southeast Sulawesi.

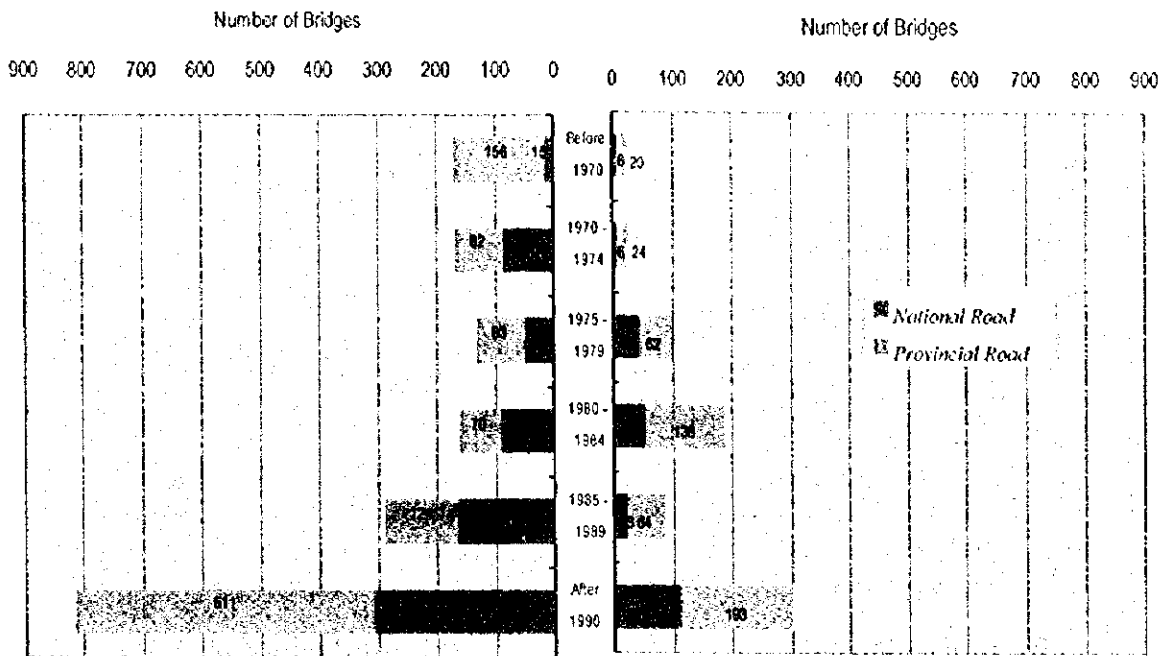
There are 24 locations in Central Sulawesi and 100 locations in Southeast Sulawesi requiring bridges. The total length of sections lacking bridges translated into necessary bridge length in Central Sulawesi is 1.1 km, and 2.8 km in Southeast Sulawesi. In Southeast Sulawesi it should be noted that the total of sections lacking bridges on national roads is more significant. However, some bridges are under construction at these places.

The bridge length of most bridges is less than 20 m. These bridges are constructed with the reinforced concrete slab or girder with spans of 5 m to 10 m in length or with timber for a span of less than 10 m. There are more bridges of less than 5.0m span length in Central Sulawesi than in Southeast Sulawesi. In Southeast Sulawesi, therefore, many timber bridges and reinforced concrete slab bridges have been constructed. Many abutments of these concrete slab bridges and timber bridges are seriously damaged due to aging and low structural endurance.

Steel truss component bridges that have been imported from Australia are recently being used for bridges with relatively long spans. The number and total length of steel truss bridges in Southeast Sulawesi is much less than in Central Sulawesi. Furthermore, there are many more sections lacking bridges in Southeast Sulawesi than in Central Sulawesi. This means that, in Southeast Sulawesi, many sections where relatively long bridges are required have not been improved yet.

Regarding bridge width, most bridges are less than 6.0 m wide in number but bridges which are more than 6.0 m wide account for large part of a total length. Therefore, it can be said that there are not a great number of bridges that would need to be replaced for reasons of safety in the event that the road is widened. Although bridge width is sufficient, the degree of damage or deterioration of bridges should be certainly considered as there are a large number of bridges in the Study Area which were constructed before 1970.

There are many old bridges which were constructed before 1970, but there are also many new bridges which were constructed after 1990. In both the Central and the Southeast Sulawesi, bridge construction greatly increased after 1990.

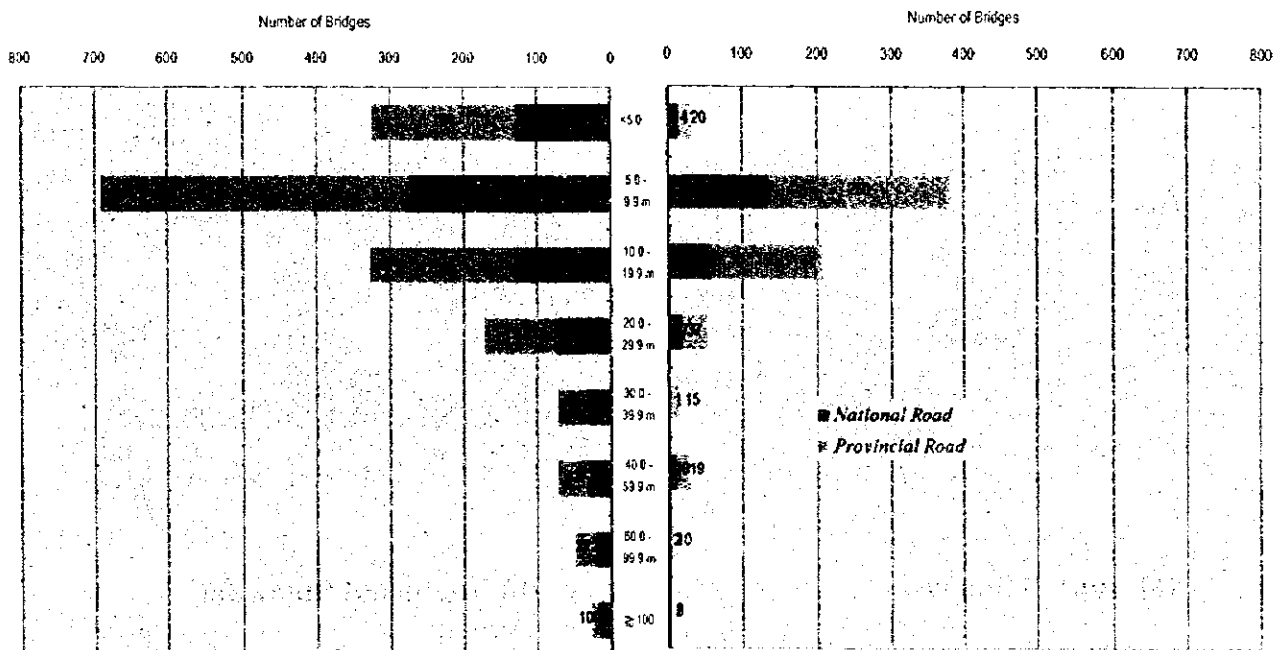


(a) Central Sulawesi

(b) Southeast Sulawesi

Source: Bina Marga

Figure 2-5-4 Number of Bridges Classified by Year of Construction



(a) Central Sulawesi

(b) Southeast Sulawesi

Source: Bina Marga

Figure 2-5-5 Number of Bridges Classified by Span Length

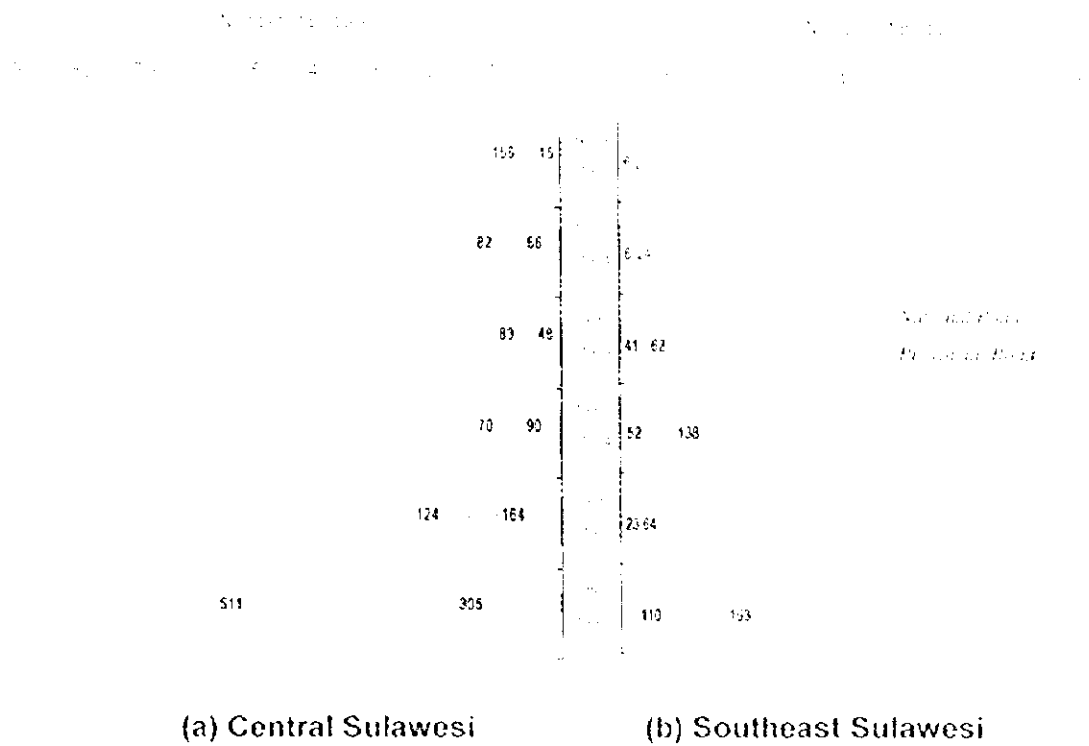


Figure 2-5-4 Number of Bridges Classified by Year of Construction

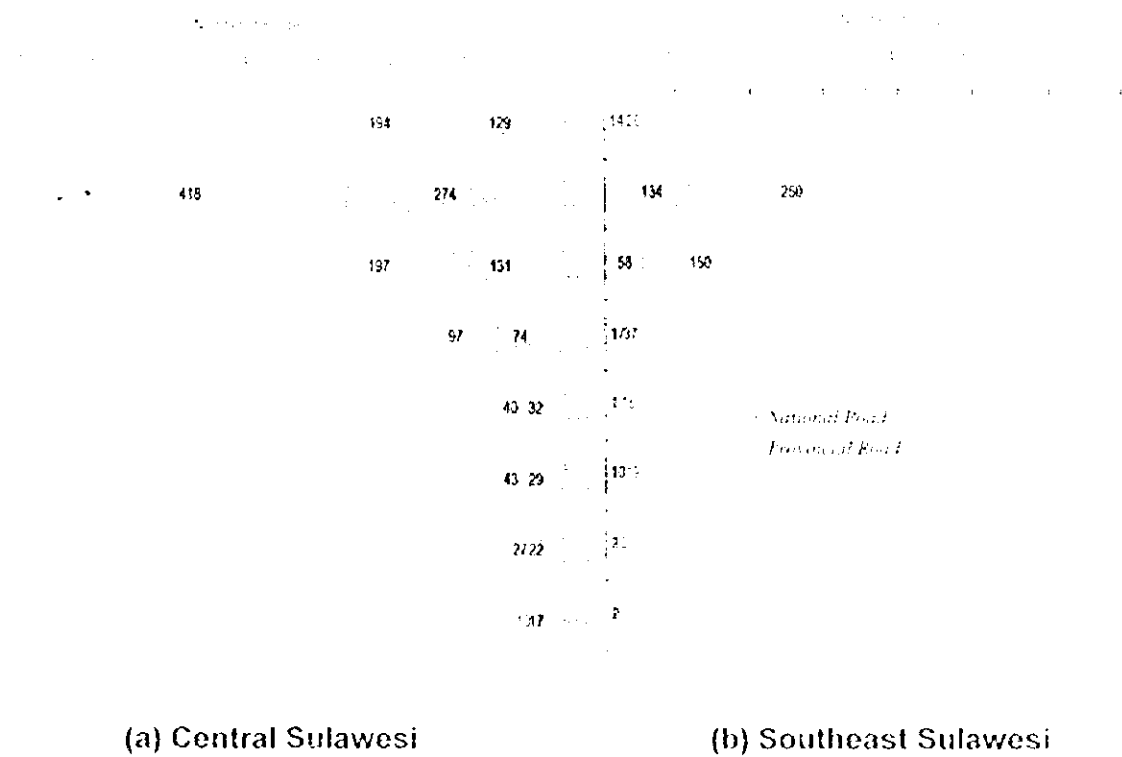
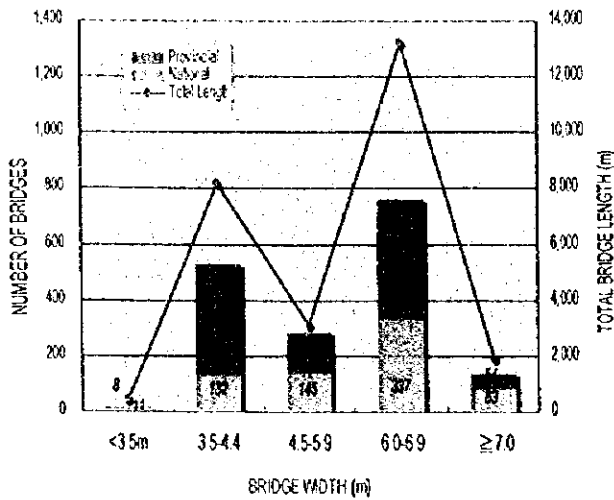
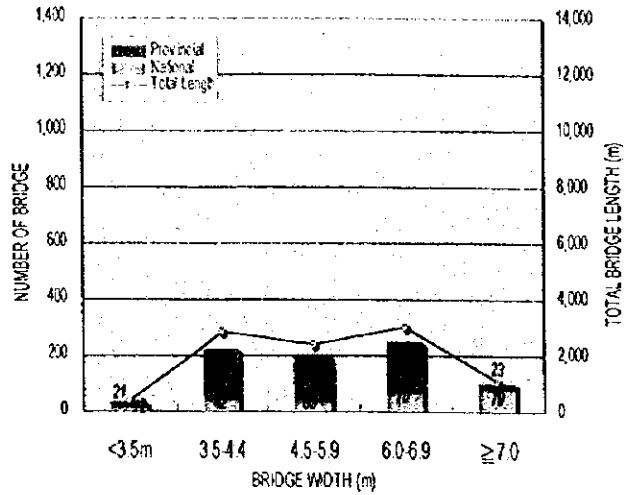


Figure 2-5-5 Number of Bridges Classified by Span Length



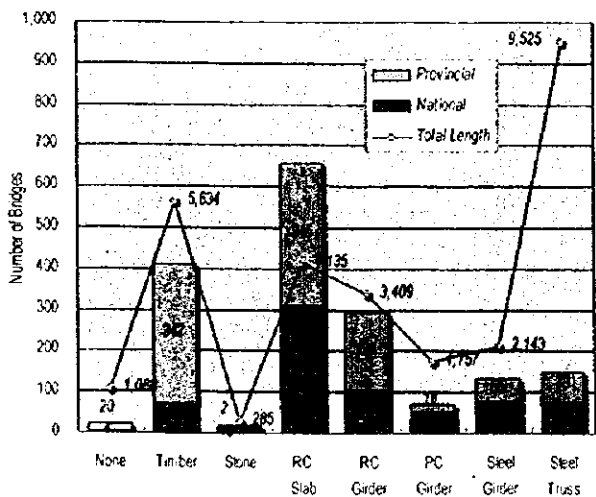
(a) Central Sulawesi



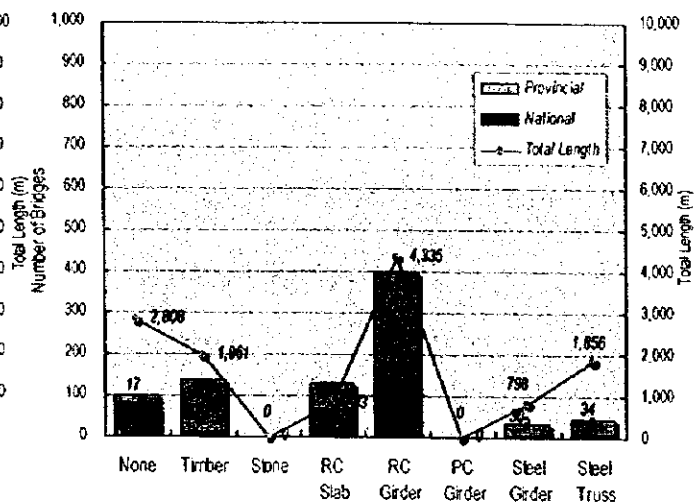
(b) Southeast Sulawesi

Source: Bina Marga

Figure 2-5-6 Number and Length of Bridges Classified by Bridge Width



(a) Central Sulawesi



(b) Southeast Sulawesi

Source: Bina Marga

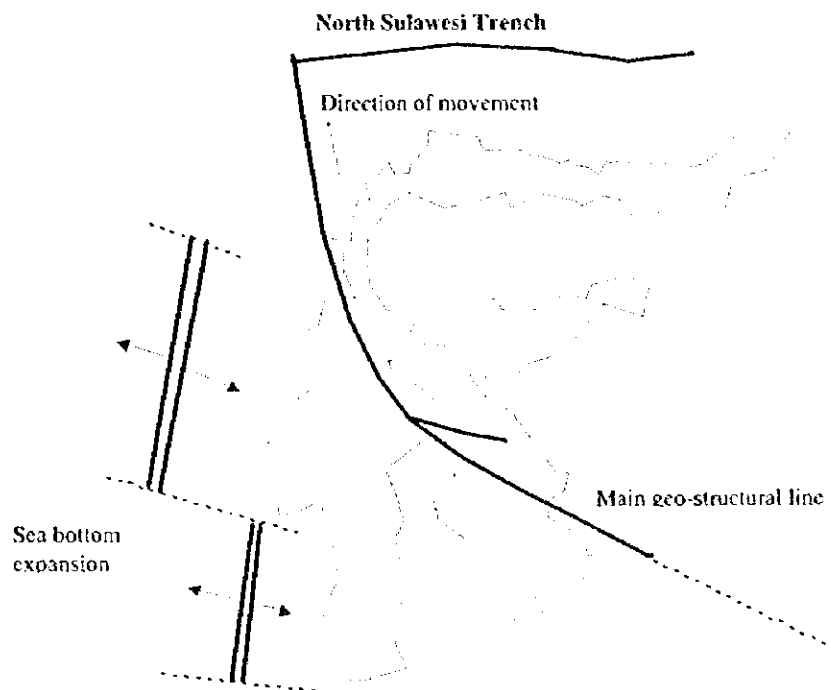
Figure 2-5-7 Number and Length of Bridges Classified by Bridge Types



## 2.6 Geological Condition in Sulawesi

### 2.5.1 Geological Structure

The main geological structural line (fault) extending northwest to southwest, Palu to Kendari, divides Sulawesi Island into two geological blocks, as shown in Figure 2-6-1. This structural line is still active and causing the eastern half of the island to move northward. Many faults have developed parallel to the main structural line, which form important geological boundaries. This means that geological the structure develops in a north-south direction on Sulawesi. The main structural line meets the North Sulawesi Trench which extends from west to east in the Sulawesi Sea, where plate subduction is still taking place in accordance with the plate tectonics theory. The sea bottom of the Makassar Strait is expanding in an east - west direction.



*Source: Geological Map in Sulawesi*

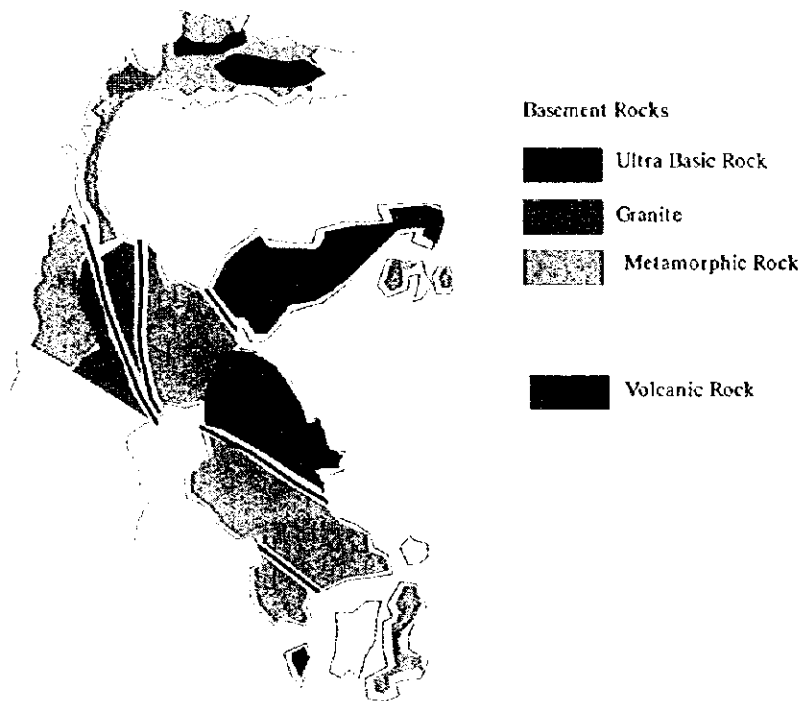
**Figure 2-6-1 Concept of Geological Structure of Sulawesi Island**

### 2.6.2 Lithology and Stratigraphy of the Study Area

Lithology and stratigraphy of the Central Sulawesi and the Southeast Sulawesi Provinces are classified into three areas based on type of basement rock as shown below.

- 1) Area where basement rock is comprised of metamorphic rock.
- 2) Area where basement rock is comprised of granite.
- 3) Area where basement rock is comprised of ultra-basic rock.

Types of basement rock described above are usually covered by various kinds of sedimentary rock, as shown in Figure 2-6-2.

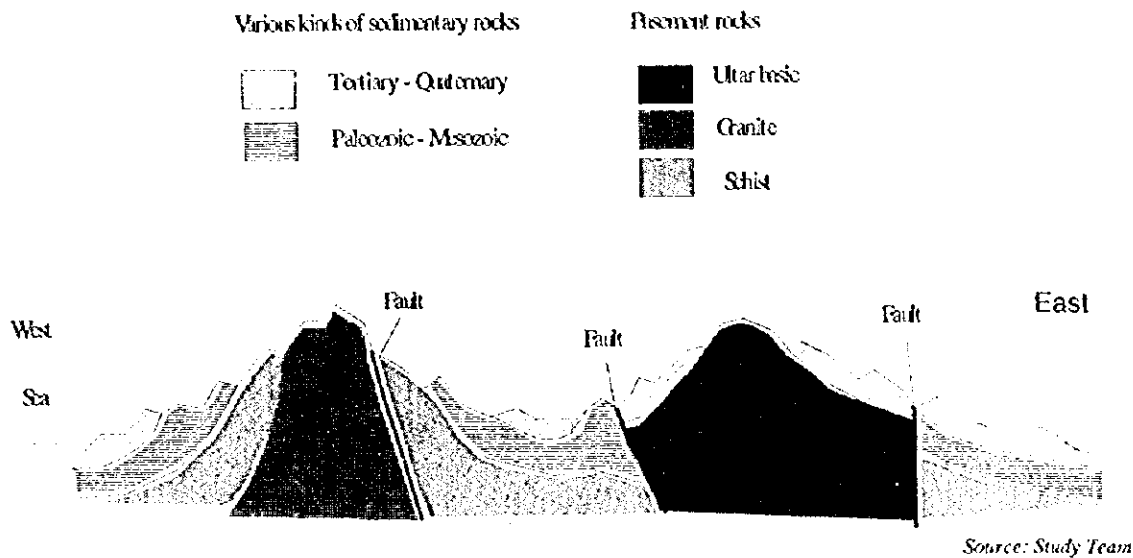


*Source: Geological Map in Sulawesi*

**Figure 2-6-2 Basement Rock Distribution In the Study Area**



Concept of geological profile is shown in Figure 2-6-3.



**Figure 2-6-3 Geological Profile of Central Sulawesi (west - east)**

Some important faults extending from northwest to southeast make boundaries between metamorphic basement rock and ultra-basic basement rock, where metamorphic rock is distributed usually on the west sides of the faults and ultra-basic rock is distributed on the east sides. In many areas, sedimentary rock dating from Mesozoic to Tertiary covers a basement of metamorphic rock, granite and ultra-basic rock. Tertiary rock is distributed throughout the hillsides, and alluvial deposits are distributed on the coastal plane. Volcanic rock is distributed only in the north end of the island. The geological situation in the Central Sulawesi and Southeast Sulawesi Provinces is as follows:

**(1) Area where basement rock is comprised of metamorphic rock**

Metamorphic rock forms the geological basement in the Donggala Kambupaten and the west half of Poso Kambupaten of the Central Sulawesi Province and in a large part of the Southeast Sulawesi Province exception of the northeast portion. Areas where metamorphic rock is distributed on the ground surface are as follows;

- 1) Area around Lake Poso and the Pompangeo Mountains of Donggala Kambupaten of Central Sulawesi.
- 2) Area around the east of Palu City including Tawaeli - Toboli area.
- 3) The Tangkeboke Mountains of the Southeast Sulawesi and others.

Metamorphic rock is comprised of schist, gneiss and phyllite dating from the Paleozoic and Mesozoic. Such rock is hard in fresher parts of the rock but still rich in fractures developed parallel to each other, which is characteristic of metamorphic rock.

**(2) Area where basement rock is comprised of granite.**

Granite outcroppings are found and form the geological basement of the Takolekayu Mountains and the Pegunungan Mountains located along the border between Donggala Kabupaten and Poso Kabupaten of the Central Sulawesi. There are also outcroppings along the border between Donggala Kabupaten and Toli-Toli Kabupaten of the Central Sulawesi Province. Granite is found intruding into the metamorphic of Tertiary rock. The rock is generally harder where it is fresh.

**(3) Area where basement rock is Comprised of ultra-basic rock**

Ultra-basic rock forms the geological basement over a large area from the east half of Poso Kabupaten to northeast of Southeast Sulawesi. Ultra-basic rock outcrops are found in the areas below:

- 1) The Pompage and Balingara Mountains extending from Donggala Kabupaten to Luwuk Kabupaten.
- 2) Border area between Central Sulawesi and Southeast Sulawesi.

Ultra-basic rock is comprised mainly of peridotite, gabbro and serpentine dating from the Mesozoic. Though the ultra-basic rock is hard where the rock is fresh, it is generally said that the rock is easily dissolved by weathering, and sometimes forms fracture and alteration zones.

**(4) Sedimentary rock covering the basement rock**

Various kinds of sedimentary rock dating from Mesozoic and Cenozoic overlay the basements of metamorphic, granite and ultra-basic rock described above. Hence, distribution of rock outcroppings on the ground surface is complicated. Rock outcropping is basement rock in some places, but sedimentary rock covering the basement rock in other places. Generally speaking, basement rock is distributed in higher places such as mountainous areas, on the other hand, newly-deposited rock is distributed in lower places such as hills and plains. Distribution of the sedimentary rock is as follows:

### **Sedimentary rock of paleozoic and mesozoic**

Sedimentary rock of Paleozoic and Mesozoic consists of shale, sandstone, conglomerates, limestone, and others. These rocks are distributed widely in the west and the north of the Donggala Kambupaten, in the center of the Toli-Toli Kambupaten, in mountains and hills of the center of Southeast Sulawesi, on Buton Island, and others. These rocks are hard where they are fresh.

### **Sedimentary rock of Tertiary and Quaternary**

Sedimentary rock of Tertiary and Quaternary consists of alternating sandstone / mudstone / conglomerates and reef limestone. These rocks are still young from a geological viewpoint and generally not strongly consolidated, hence they have the physical properties of soft rock and soils. On the other hand, limestone is relatively harder than other rock types. Sedimentary rock usually forms the hills between mountains and plains in the study area. Sedimentary rock is distributed along the Tawaeli-Toboli road in the hillsides near Tawaeli.

### **Volcanic rock**

Volcanic rock is distributed in the Toli-Toli Kambupaten of Central Sulawesi. These volcanoes were active early in Tertiary period and are now inactive. The volcanic rock consists of basalt and andesite lava, as well as volcanic breccia.

### **Alluvium**

Alluvium is distributed along the coastal plains, flood plains and swamps along rivers in the study area. The alluvial deposits consist of unconsolidated soft clay and sand.

## **2.7 Obstacles and Issues**

The total road length of the national and province roads in the study area, is 4,884 km. The road length per unit area is 0.05 km/km<sup>2</sup> which is not quite a half of that in Java Island. The roads in the study area, including important roads for social, economical and production activities; are of low standards, provide insufficient links, lack disaster prevention measures and are in need of maintenance. Therefore, road improvement is needed to facilitate regional activities.

## **Chapter 3**

# **Socio-Economic Activities and Framework**

## **Chapter 3      SOCIO-ECONOMIC ACTIVITIES AND FRAMEWORK**

### **3.1      Present Conditions**

#### **3.1.1    Population**

The population of the study area includes the four provinces of Central (Tengah) Sulawesi, Southeast (Fenggara) Sulawesi, North (Utara) Sulawesi, and South (Selatan) Sulawesi. The populations for the two provinces of Central Sulawesi and Southeast Sulawesi were compiled according to kabupaten and kecamatan, while the population of Central Sulawesi and South Sulawesi was compiled by kabupaten. Table 3-1-1 presents the population of the study area as recorded during the 1980 census, the 1990 census, and the 1995 population registration. The table also presents the population growth rates between these periods, as well as the land areas and population densities.

During the period between 1980 and 1990, Southeast Sulawesi recorded the most rapid growth in population of the four provinces, at a rate of 3.66% per year. This was followed by Central Sulawesi at 2.9% per year, South Sulawesi at 1.4% per year, and North Sulawesi at 1.15% per year.

During the period between 1990 and 1995, Central Sulawesi recorded the most rapid population growth rate at 2.08%. During this period the population growth rate in the administrative areas of Central Sulawesi ranged from a low of 1.3% per year in Kabupaten Donggala to a high of 45.69% per year in Kotamadya Palu.

The second highest population growth rate among the four provinces from 1990 to 1995 was in South Sulawesi, which grew at an average of 1.84% per year. This was followed by Southeast Sulawesi at 1.6% per year, and North Sulawesi at 1.4% per year. In South Sulawesi the most rapidly growing population was in Kotamadya Ujung Pandang, which grew at an average of 5.99% per year from 1990 to 1995. In Southeast Sulawesi and North Sulawesi the most rapidly growing populations were in Kabupaten Kendari (2.03% p.a.) and Kotamadya Manado (3.6% p.a.), respectively.

The respective population densities of the provinces of Central, Southeast, North, and South Sulawesi in 1995 were 30, 38, 93 and 122 persons per square kilometer. Within Central Sulawesi, the population densities range from a low of only 4 persons per square kilometer in Kecamatan Bungku Utara (Kab. Poso) to a high of 1,065 per square kilometer in Kecamatan Palu Selatan (Kod. Palu). The highest population density in Southeast Sulawesi is 1,509 persons per square kilometer in Kecamatan Kendari. Kotamadya Manado has the highest population density in North Sulawesi at 2,437 persons per square kilometer. Kotamadya Ujung Pandang in South Sulawesi has the highest population density in Sulawesi at 7,186 persons per square kilometer.

Table 3-1-1 (1) Population, Population Growth and Population Density in Study Area

Province	Kabupaten/Kecamatan	Population			Pop. Growth		Area km <sup>2</sup>	Population Density (Pop./km <sup>2</sup> )		
		Census		Reg.	Rate (% p.a.)			1980	1990	1995
		1980	1990	1995	80-90	90-95				
Central Sulawesi	Kec. Lebang Kurung	15,181	17,370	18,978	1.58%	1.32%	403.75	38	44	47
	Kec. Batui	47,425	67,031	72,057	3.52%	1.46%	3,152.00	15	21	23
	Kec. Totikum	12,860	14,704	15,206	1.35%	0.67%	275.50	47	53	55
	Kec. Tinangkung	13,726	16,240	17,210	1.70%	1.17%	555.60	25	29	31
	Kec. Liang	11,453	13,268	14,346	1.43%	1.57%	296.00	39	45	48
	Kec. Pulagi	20,747	21,920	24,210	0.55%	2.01%	854.40	24	26	28
	Kec. Buho	14,089	15,477	16,075	0.94%	0.76%	348.40	40	41	46
	Kec. Banggai	17,003	21,541	22,382	2.39%	0.77%	275.60	62	78	81
	Kec. Buntia	21,152	36,179	40,376	5.51%	2.22%	1,806.50	12	20	22
	Kec. Kintom	8,043	9,522	10,175	1.70%	1.34%	485.60	17	20	21
	Kec. Luwuk	34,093	50,939	54,999	4.10%	1.55%	687.80	50	74	80
	Kec. Lamaha	15,173	18,333	20,485	1.91%	2.24%	635.00	24	29	32
	Kec. Balantak	11,258	12,597	13,068	1.13%	0.74%	455.50	25	28	29
	Kec. Pagimana	24,747	30,400	35,692	2.08%	3.26%	1,832.80	14	17	19
	Kab. Kuwuk/Banggai	266,956	345,921	375,259	2.63%	1.64%	12,064.45	22	29	31
	Kec. Menai Kepulauan	9,352	10,743	11,211	1.40%	0.86%	209.35	45	51	54
	Kec. Bungku Selatan	14,565	16,794	20,160	1.43%	3.72%	2,202.00	7	8	9
	Kec. Bungku Tengah	18,960	32,919	40,161	5.67%	4.06%	2,711.30	7	12	15
	Kec. Lembo	7,035	13,734	15,337	6.92%	2.23%	1,247.75	6	11	12
	Kec. Mori Atas	8,836	9,695	11,183	0.93%	2.90%	2,394.45	4	4	5
	Kec. Panona Selatan	9,981	17,428	20,772	5.73%	3.57%	980.40	10	18	21
	Kec. Panona Utara	20,937	25,659	27,904	2.05%	1.69%	1,861.80	11	14	15
	Kec. Lore Selatan	6,121	6,845	7,636	1.12%	2.21%	934.00	7	7	8
	Kec. Lore Utara	6,344	8,604	12,326	3.09%	7.45%	2,427.20	3	4	5
	Kec. Poso Pesisir	16,962	28,254	30,152	5.24%	1.31%	1,520.25	11	19	20
	Kec. Poso Kota	28,426	39,306	38,321	3.29%	-0.51%	56.60	502	694	677
	Kec. Lage	10,123	12,906	14,465	2.46%	2.31%	375.80	27	34	38
	Kec. Tojo	15,344	17,828	19,387	1.51%	1.69%	2,020.00	8	9	10
	Kec. Petasi	14,157	16,733	25,431	1.69%	8.73%	2,097.70	7	8	12
	Kec. Bungku Utara	9,347	17,422	16,006	6.42%	-1.68%	3,638.65	3	5	4
	Kec. Ulu Bongka	6,276	10,153	8,468	4.93%	-3.56%	1,654.30	4	6	5
	Kec. Anpana Tet	8,896	12,670	14,249	3.60%	2.38%	745.20	12	17	19
	Kec. Anpana Kota	25,550	25,676	25,891	0.05%	0.17%	222.15	115	116	117
	Kec. Una-Una	17,479	16,642	17,137	-0.49%	0.59%	493.90	35	34	35
	Kec. Walea Kepulauan	9,787	11,118	11,775	1.28%	1.15%	220.70	44	50	53
	Kab. Poso	264,451	351,128	387,972	2.87%	2.02%	28,013.50	9	13	14
	Kec. Kulawi	23,767	26,262	28,568	1.00%	1.70%	3,164.20	8	8	9
	Kec. Dolo	31,860	35,758	48,569	1.15%	6.32%	1,363.70	23	26	36
	Kec. Sigibromaru	46,950	63,521	76,128	3.07%	3.69%	941.50	50	67	81
	Kec. Parigi	60,386	79,649	82,712	2.81%	0.76%	1,522.00	40	52	54
	Kec. Marawola	24,221	29,447	32,477	1.97%	1.98%	763.80	32	39	43
	Kec. Banawa	37,213	45,552	49,179	2.04%	1.54%	508.50	73	90	97
Kec. Tawaeli	34,532	45,089	22,430	2.70%	-13.03%	338.20	102	133	66	
Kec. Ampibobo	29,192	34,443	37,320	1.67%	1.62%	838.50	35	41	45	
Kec. Sindue	23,587	26,901	28,311	1.32%	1.03%	511.60	46	53	55	
Kec. Sirenia	12,777	14,898	16,387	1.55%	1.92%	209.30	61	71	78	
Kec. Balaesang	19,165	22,180	23,334	1.47%	1.02%	540.30	35	41	43	
Kec. Dampelas Sojol	37,948	46,384	49,269	2.03%	1.21%	1,378.70	28	34	36	
Kec. Tinombo	32,099	37,259	41,458	1.50%	2.16%	921.20	35	40	45	
Kec. Tomini	32,540	44,935	49,258	3.28%	1.85%	932.00	35	48	53	
Kec. Moutong	34,876	56,926	64,354	5.02%	2.48%	1,620.30	22	35	40	
Kab. Donggala	481,113	609,204	649,754	2.39%	1.30%	15,553.80	31	39	42	
Kec. Dampal Selatan	15,177	19,075	20,177	2.31%	1.13%	367.60	41	52	55	
Kec. Dampal Utara	10,931	11,819	13,343	0.78%	2.46%	171.20	64	69	78	
Kec. Dondo	17,380	23,133	25,991	2.90%	2.36%	1,216.00	14	19	21	
Kec. Boalan	36,410	58,582	66,255	4.87%	2.49%	918.40	40	64	72	
Kec. Galang	18,962	25,657	27,758	3.07%	1.59%	559.60	34	46	50	
Kec. Utara Tob-Tob	14,302	18,343	19,448	2.52%	1.18%	549.40	26	33	35	
Kec. Biau	18,387	22,386	23,853	1.99%	1.28%	522.80	35	43	46	
Kec. Momunu	10,207	12,615	18,502	2.14%	7.96%	1,740.40	6	7	11	
Kec. Bokat	10,275	11,537	17,391	1.17%	8.55%	516.40	20	22	34	
Kec. Bunobogu	10,992	12,017	15,213	0.90%	4.83%	456.40	24	26	33	
Kec. Palakih	9,425	12,246	13,036	2.65%	1.26%	586.50	16	21	22	
Kab. Buol Toli-Toli	172,448	227,410	260,967	2.81%	2.79%	7,604.70	23	30	34	

**Table 3-1-1 (2) Population, Population Growth and Population Density in Study Area**

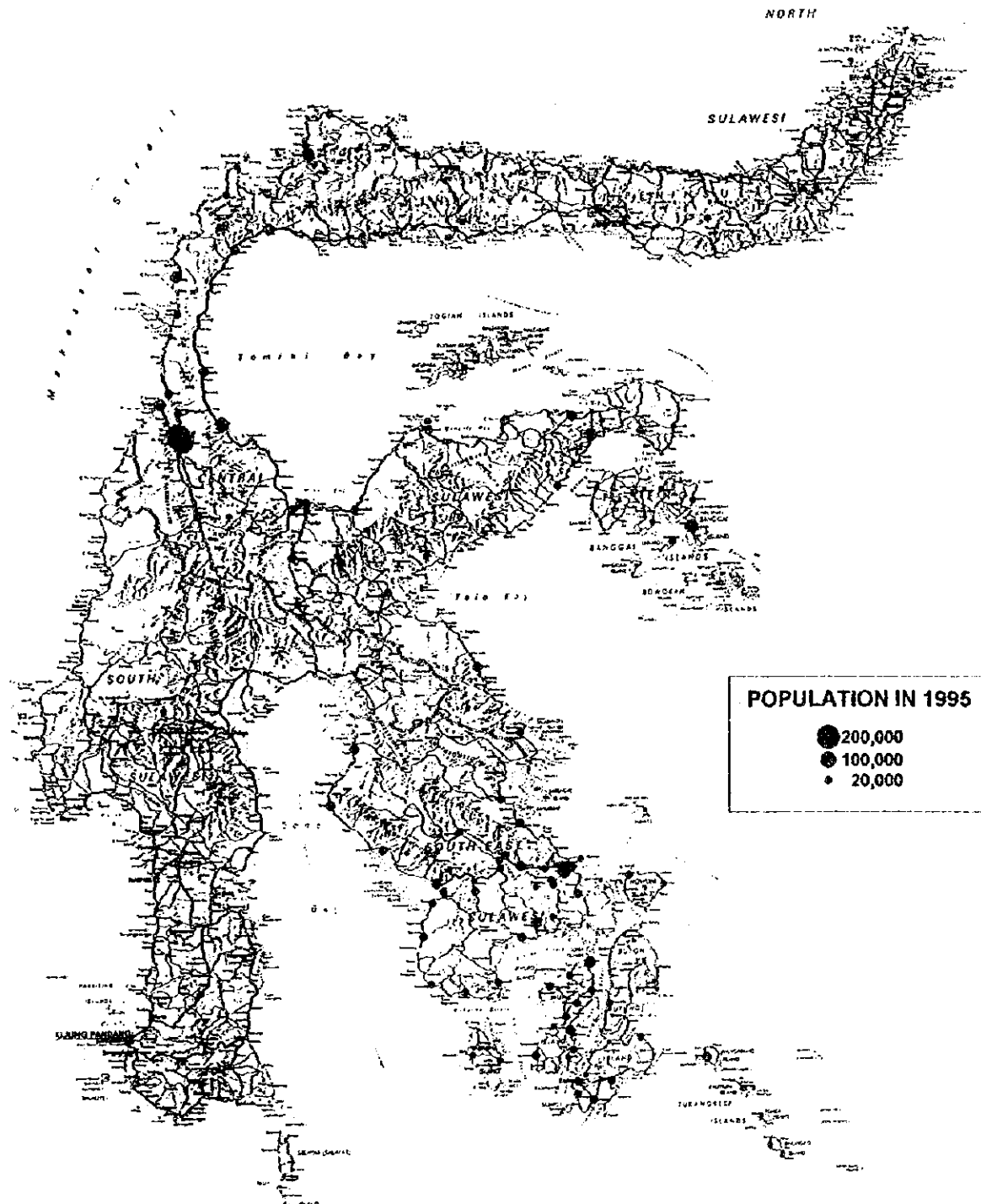
	Kec. Palu Selatan	-	-	75,016	-	-	70.46	-	-	1,065
	Kec. Palu Barat	41,457	68,911	67,697	5.21%	-0.35%	65.12	637	1,058	1,019
	Kec. Palu Timur	58,074	106,532	51,999	6.26%	-13.36%	209.47	277	509	248
	Kec. Utara	-	-	25,894	-	-	107.75	-	-	240
	Kod. Palu	99,530	175,443	220,606	5.83%	4.69%	452.80	220	387	487
	Central Sulawesi	1,784,528	1,709,106	1,894,558	2.90%	2.08%	63,639.25	20	27	30
South East Sulawesi	Kec. Binangko	10,410	10,895	11,919	0.46%	1.81%	156.00	67	70	76
	Kec. Tomia	12,739	12,797	12,910	0.05%	0.18%	115.00	111	111	112
	Kec. Kaledupa	15,397	13,878	14,348	-1.03%	0.67%	104.00	148	133	138
	Kec. Wangi-Wangi	30,415	32,176	34,435	0.56%	1.37%	443.00	65	72	77
	Kec. Lasalimu	10,688	16,885	22,636	4.68%	6.04%	597.00	18	28	38
	Kec. Pasar Wajo	23,798	28,160	29,229	1.70%	0.75%	473.00	50	60	62
	Kec. Sampolawa	21,327	25,426	26,534	1.77%	0.86%	206.00	104	123	129
	Kec. Banuaga	18,223	21,855	23,822	1.83%	1.74%	142.00	128	154	168
	Kec. Sorowaho	-	4,366	5,074	-	3.05%	83.25	-	52	61
	Kec. Bungi	-	8,370	8,703	-	0.78%	76.64	-	109	114
	Kec. Kapentori	6,181	7,860	9,141	2.43%	3.07%	113.00	55	70	81
	Kec. Gu	27,976	17,012	17,662	-4.85%	0.75%	114.00	245	149	155
	Kec. Lakudo	-	13,652	14,296	-	0.93%	225.00	-	61	64
	Kec. Mawasangka	21,633	26,954	28,543	2.22%	1.15%	548.00	39	49	52
	Kec. Kabaena Timur	-	14,135	14,795	-	0.92%	451.24	-	31	33
	Kec. Kabaena	21,803	12,435	14,368	-5.54%	3.10%	487.76	45	25	29
	Kec. Paleang Timur	-	20,833	17,668	-	-3.24%	511.08	-	41	35
	Kec. Paleang	27,071	17,390	21,767	-4.33%	4.59%	550.92	49	32	40
	Kec. Rumbia	15,602	24,941	24,523	4.80%	-0.34%	1,000.00	16	25	25
	Kec. Wolio	53,496	30,712	30,200	-5.40%	-0.34%	26.77	1,998	1,147	1,128
	Kec. Beto Ambari	-	33,722	34,394	-	0.40%	34.34	-	982	1,002
	Kab. Buton	316,759	391,354	416,967	2.22%	1.12%	6,463.00	49	61	65
	Kec. Tonokuro	12,559	14,252	14,273	1.27%	0.03%	515.91	24	28	28
	Kec. Parigi	-	15,559	17,783	-	2.71%	322.90	-	48	55
	Kec. Kabawo	24,764	17,509	18,558	-3.41%	1.17%	327.68	76	53	57
	Kec. Tiworo Kepulauan	10,239	19,374	19,492	6.59%	0.12%	329.44	31	59	59
	Kec. Fawa	17,659	21,107	22,324	4.80%	1.13%	395.91	45	53	56
	Kec. Kusambi	-	23,197	24,655	-	1.23%	282.24	-	82	87
	Kec. Katobu	21,987	51,475	53,032	-3.35%	0.72%	104.87	686	488	506
	Kec. Napabulano	-	18,428	19,427	-	1.06%	284.24	-	65	68
	Kec. Wakorumba Selatan	-	9,905	10,372	-	0.93%	243.16	-	41	43
	Kec. Bonegunu	-	7,149	10,195	-	7.45%	794.88	-	9	13
	Kec. Wakorumba	15,328	9,401	10,306	-4.77%	1.86%	402.88	38	23	26
	Kec. Kahusu	21,477	19,844	27,068	-0.79%	6.41%	882.89	24	22	31
	Kab. Muna	174,013	226,870	247,455	2.69%	1.75%	4,887.00	36	46	51
	Kec. Tinanggea	32,586	39,798	43,538	2.02%	1.81%	976.43	33	41	45
	Kec. Palangga	-	16,659	18,007	-	4.57%	495.18	-	34	36
	Kec. Konda	-	11,267	13,136	-	3.12%	329.08	-	34	40
	Kec. Linea	19,969	26,876	29,796	3.02%	2.08%	739.49	21	36	40
	Kec. Moramo	17,114	20,959	22,674	2.05%	1.59%	777.17	22	27	29
	Kec. Wowoni	16,165	10,174	11,754	-4.52%	2.93%	420.84	38	24	28
	Kec. Waworete	-	10,877	12,011	-	2.00%	352.41	-	31	34
	Kec. Soropia	6,968	8,726	9,406	2.28%	1.51%	86.36	81	101	109
	Kec. Sanpara	15,970	19,775	21,221	2.16%	1.42%	337.24	47	59	63
	Kec. Ronemeto	27,605	14,170	14,268	-6.45%	0.14%	172.09	160	82	83
	Kec. Londono	-	12,499	18,524	-	8.19%	282.85	-	44	65
	Kec. Lembuya	21,678	34,284	38,786	4.69%	2.59%	1,262.19	17	27	31
	Kec. Padihaha	-	27,942	28,878	-	0.66%	395.47	-	71	73
	Kec. Wawotobi	25,052	23,887	25,389	-0.48%	1.23%	221.55	113	108	115
	Kec. Lasalo	14,321	18,113	19,049	2.38%	1.01%	1,078.98	13	17	18
	Kec. Unaha	18,012	17,491	18,717	-0.29%	1.36%	181.45	99	96	103
	Kec. Abuki	-	19,584	20,529	-	0.95%	1,939.38	-	10	11
	Kec. Asera	8,859	10,918	14,592	2.11%	5.97%	6,135.93	4	2	3
	Kab. Kendari	224,299	343,999	380,278	4.37%	2.03%	16,184.09	14	21	23
	Kec. Mandonga	27,249	68,878	75,481	9.72%	1.85%	128.63	212	535	587
	Kec. Posata	14,060	19,966	22,139	3.57%	2.09%	131.76	107	152	168
	Kec. Kendari	41,067	55,628	53,567	3.08%	-0.75%	35.50	1,157	1,567	1,509
	Kod. Kendari	82,376	144,472	151,187	5.78%	0.91%	295.89	278	438	511

**Table 3-1-1 (3) Population, Population Growth and Population Density in Study Area**

	Kec. Wundulako	40,563	19,315	19,211	-7.15%	-0.11%	290.47	149	66	66
	Kec. Lanjongi	-	24,862	29,155	-	3.24%	633.20	-	38	45
	Kec. Tirawuta	23,250	12,826	14,297	-5.77%	2.20%	351.14	61	31	38
	Kec. Kolaka	37,352	33,522	36,131	-1.08%	1.51%	515.48	72	65	70
	Kec. Wolo	-	25,145	28,085	-	2.24%	1,190.54	-	21	24
	Kec. Mowewe	7,845	11,248	12,712	3.67%	2.48%	2,636.14	3	4	5
	Kec. Lasusua	18,329	33,279	35,649	6.17%	1.39%	1,290.37	14	26	28
	Kec. Pakue	16,895	34,291	39,639	7.31%	2.94%	2,101.25	8	16	19
	<b>Kab. Kolaka</b>	<b>144,234</b>	<b>194,488</b>	<b>214,879</b>	<b>5.21%</b>	<b>2.01%</b>	<b>9,058.59</b>	<b>16</b>	<b>21</b>	<b>24</b>
	<b>South East Sulawesi</b>	<b>941,681</b>	<b>1,304,183</b>	<b>1,410,296</b>	<b>3.66%</b>	<b>1.60%</b>	<b>36,888.57</b>	<b>26</b>	<b>35</b>	<b>38</b>
North Sulawesi	Kab. Bolang Mongondow	299,696	372,535	409,284	2.20%	1.90%	8,358.04	35	45	49
	Kab. Gorontalo	502,443	595,763	638,872	1.72%	1.41%	12,150.65	41	49	53
	Kod. Gorontalo	97,610	119,745	130,645	2.06%	1.76%	64.79	1,507	1,848	2,016
	Kod. Manado	217,091	320,600	382,567	3.98%	3.60%	157.00	1,383	2,042	2,437
	Kab. Minahasa	759,591	702,604	712,748	-0.78%	0.29%	4,167.87	182	169	171
	Kab. Sangihe Talaud	238,391	260,304	267,580	0.88%	0.55%	2,263.95	105	115	118
	Kod. Bitung	-	105,638	107,397	-	0.33%	301.00	-	347	353
	<b>North Sulawesi</b>	<b>2,114,822</b>	<b>2,477,189</b>	<b>2,649,023</b>	<b>1.15%</b>	<b>1.40%</b>	<b>27,466.30</b>	<b>77</b>	<b>90</b>	<b>96</b>
South Sulawesi	Kab. Selayar	95,467	93,439	100,479	0.31%	0.40%	903.33	106	109	111
	Kab. Bulukumba	312,363	335,898	340,422	0.73%	0.27%	1,154.67	271	291	295
	Kab. Bantaeng	117,272	144,554	149,349	2.11%	0.65%	395.83	296	365	377
	Kab. Jeneponto	241,627	289,799	306,654	1.83%	1.14%	737.64	328	393	416
	Kab. Takalar	173,411	206,089	212,869	1.74%	0.65%	566.51	306	364	376
	Kab. Gowa	356,514	429,157	446,313	1.87%	0.79%	1,883.32	189	228	237
	Kab. Sinjai	169,166	193,534	198,111	1.35%	0.47%	819.96	206	236	242
	Kab. Bone	622,930	610,275	606,744	-0.21%	-0.12%	4,559.00	137	134	133
	Kab. Maros	201,689	239,725	247,757	1.74%	0.66%	1,619.12	125	148	153
	Kab. Pang. Kepulauan	219,692	245,820	253,445	1.13%	0.61%	1,112.29	198	221	228
	Kab. Barru	135,354	146,653	149,912	0.80%	0.44%	1,174.71	115	125	128
	Kab. Soppeng	233,952	225,039	230,765	-0.39%	0.50%	1,359.44	172	166	170
	Kab. Wajo	372,327	357,507	401,909	-0.41%	2.37%	2,506.19	149	143	160
	Kab. Sid. Rappang	209,356	232,279	235,964	1.04%	0.32%	1,883.25	111	123	125
	Kab. Pinrang	268,424	296,973	303,113	1.02%	0.41%	1,961.77	137	151	155
	Kab. Tarekang	131,769	147,079	153,193	1.11%	0.82%	1,785.01	74	82	86
	Kab. Luwu	506,743	683,700	763,979	3.04%	2.25%	17,791.43	28	38	43
	Kab. Tana Toraja	330,476	362,693	367,370	0.93%	0.26%	3,205.77	103	113	115
	Kab. Pole. Mamas	360,384	400,413	421,836	1.06%	1.05%	4,781.53	75	84	88
	Kab. Majene	120,782	111,284	134,087	-0.82%	3.80%	947.84	127	117	141
	Kab. Mamuju	99,750	177,796	256,648	5.95%	7.62%	11,057.81	9	16	23
	Kod. Ujung Pandang	708,455	944,372	1,263,039	2.92%	5.99%	175.77	4,031	5,373	7,186
	Kod. Pare-Pare	86,360	101,421	103,484	1.62%	0.40%	99.33	869	1,021	1,042
	<b>South Sulawesi</b>	<b>6,074,273</b>	<b>6,980,549</b>	<b>7,647,492</b>	<b>1.40%</b>	<b>1.84%</b>	<b>62,482.54</b>	<b>97</b>	<b>112</b>	<b>122</b>

Source: Dalam Angka by Provincial Bappeda and Hasil Census by Statistic Office Propinsi Sulawesi Tengah, Sulawesi Tenggara, Sulawesi Utara, Sulawesi Selatan





**Figure 3-1-1 Population in 1995 by Kecamatan in Central Sulawesi and South East Sulawesi**

Source: *Dalam Angka Kabupaten in Central Sulawesi and Southeast Sulawesi Provinces*

### **3.1.2 Labor Force and Employment**

The size of the labor force and the number of employed persons were compiled for each kabupaten in the study area for the years 1990 and 1995 (Table 3-1-2). The labor force over the 15 years old grew at an average 4.86% per year from 1990 to 1995 in the four provinces of the study area. During this same period the growth in the number of employed persons averaged 3.76% per year.

Southeast Sulawesi had the most rapid growth in labor force at 5.73% per year. This was followed by Central, South, and North Sulawesi at 5.43%, 5.24%, and 3.04% per year, respectively. Employment grew at 4.97%, 4.19%, 4.49%, and 1.42% per year in Southeast, Central, South, and North Sulawesi, respectively.

For the period from 1990 to 1995, the labor force, as a percentage of the population, grew from 38% to 44%. During this same period the number of employed persons as a percentage of the total population grew from 36.5% to 40%. Although the total labor force and employment expanded during this period, the percentage of the labor force that were employed fell from 96% in 1990 to 91% in 1995.

### **3.1.3 Transmigration**

The study area received almost 70,000 migrants from 1990/1991 to 1993/1994 at an average of 17,500 migrants per year. Central and Southeast Sulawesi received almost 75% of the migrants, while the majority of them settled in Central Sulawesi (Table 3-1-3).

Within Central Sulawesi, most of the migrants from 1990/1991 to 1993/1994 were recorded in Kabupaten Poso. In 1994/1995 a very large number of migrants were recorded in Kabupaten Donggala. The 48,456 new migrants recorded in Kabupaten Donggala in 1994/1995 represent almost 70% of the cumulative migrants in Sulawesi from 1990/1991 to 1993/1994.

Table 3-1-2 Labor Force and Employment in Study Area, 1990 and 1995

Province	Kabupaten/Kecamatan	Labor Force	Employment	Labor Force	Employment	Growth Rate (% p.a.)	
		1990	1990	1995	1995	Labor Force	Employment
Central Sulawesi	Kab. Kuwuk/Banggai	153,598	151,680	201,680	192,664	5.60%	4.90%
	Kab. Poso	143,157	139,830	179,477	165,173	4.63%	3.39%
	Kab. Donggala	302,183	292,276	297,314	272,296	-0.32%	-1.41%
	Kab. Buol Toli-Toli	81,795	78,245	105,503	95,708	5.22%	4.11%
	Kod. Palu			102,815	86,845		
	Central Sulawesi	680,733	662,031	886,789	812,686	5.43%	4.19%
Southeast Sulawesi	Kab. Buton	144,424	139,927	171,877	157,638	3.54%	2.41%
	Kab. Muna	86,353	82,313	108,724	103,238	4.72%	4.63%
	Kab. Kendari	185,923	180,683	264,900	246,507	7.34%	6.41%
	Kod. Kendari						
	Kab. Kolaka	82,881	80,207	114,576	108,248	6.69%	6.18%
	Southeast Sulawesi	499,581	483,130	660,077	615,631	5.73%	4.97%
North Sulawesi	Kab. Bolang Mangandow	150,287	148,076	180,448	162,780	3.66%	1.91%
	Kab. Gorontalo	239,402	232,093	263,584	236,752	1.94%	0.40%
	Kod. Gorontalo	44,908	40,088	59,678	46,852	5.85%	3.17%
	Kod. Manado	113,045	100,359	159,160	134,889	7.08%	6.09%
	Kab. Minahasa	340,539	326,908	320,904	291,328	-1.18%	-2.28%
	Kab. Sangihe Talaut	107,762	105,667	124,522	108,754	2.93%	0.58%
	Kod. Bitung			48,972	41,685		
	North Sulawesi	996,443	953,191	1,157,268	1,023,040	3.04%	1.42%
South Sulawesi	Kab. Selayar	35,974	33,952	43,502	40,831	3.87%	3.76%
	Kab. Bulukumba	102,384	97,670	113,896	106,777	2.15%	1.80%
	Kab. Bantaeng	47,354	46,759	64,828	61,652	6.48%	5.69%
	Kab. Jeneponto	75,637	73,222	174,660	173,011	18.22%	18.76%
	Kab. Takalar	71,861	69,683	108,146	106,396	8.52%	8.83%
	Kab. Gowa	151,451	145,124	172,570	157,189	2.65%	1.61%
	Kab. Sinjai	57,534	55,749	77,958	73,646	6.26%	5.73%
	Kab. Bone	203,116	190,233	237,447	214,881	3.17%	2.47%
	Kab. Maros	74,361	69,812	94,058	88,566	4.81%	4.87%
	Kab. Pang. Kepulauan	75,030	69,244	91,971	88,782	4.83%	5.10%
	Kab. Barru	46,789	41,600	60,542	52,900	5.29%	4.92%
	Kab. Soppeng	80,528	75,966	87,874	77,760	1.76%	0.47%
	Kab. Wajo	133,447	129,450	148,682	132,197	2.19%	0.42%
	Kab. Sid. Rappang	78,886	75,836	87,603	78,634	2.12%	0.73%
	Kab. Pinrang	90,455	85,371	110,199	105,826	4.03%	4.39%
	Kab. Enrekang	46,898	46,149	64,264	59,319	6.50%	5.15%
	Kab. Luwu	230,333	225,934	293,784	271,705	4.99%	3.76%
	Kab. Tana Toraja	113,962	111,578	153,623	145,034	6.15%	5.38%
	Kab. Pole. Mamasa	152,648	149,992	194,454	189,376	4.96%	4.77%
	Kab. Majene	47,719	46,234	44,699	40,137	-1.30%	-2.79%
Kab. Mamuju	74,416	72,961	115,039	111,783	9.10%	8.91%	
Kod. Ujung Pandang	283,805	253,051	391,090	320,908	6.62%	4.87%	
Kod. Pare-Pare	28,665	26,842	40,138	33,957	6.96%	4.81%	
	South Sulawesi	2,303,253	2,192,409	2,974,027	2,731,270	5.24%	4.49%

Source: Dalam Angka Propinsi by Provincial Bappeda and Hasil Census by Statistic Office

Table 3-1-3 Transmigration in Study Area

Province	Kabupaten/Kecamatan	1990/ 1991	1991/ 1992	1992/ 1993	1993/ 1994	1994/ 1995
Central Sulawesi	Kab. Luwuk/Banggai	2,463	1,904	1,818	1,072	2,024
	Kab. Poso	5,297	3,078	5,686	5,244	3,663
	Kab. Donggala					48,356
	Kab. Buol Toli-Toli	2,146	2,146	2,146	2,146	
	Kod. Palu					
	Central Sulawesi	9,906	7,128	9,650	8,462	54,043
Southeast Sulawesi	Kab. Buton	1,723	1,750	874	738	539
	Kab. Muna	0	0	1,488	2,001	3,572
	Kab. Kendari	675	1,867	2,176	260	2,500
	Kod. Kendari					
	Kab. Kolaka	0	726	0	756	775
Southeast Sulawesi	2,398	4,343	4,538	3,755	7,386	
North Sulawesi	Kab. Bolang Mangondow					
	Kab. Gorontalo					
	Kod. Gorontalo					
	Kod. Manado					
	Kab. Minahasa					
	Kab. Sangihe Talaut					
	Kod. Bitung					
North Sulawesi						
South Sulawesi	Kab. Selayar					
	Kab. Bulukumba					
	Kab. Bantaeng					
	Kab. Jeneponto					
	Kab. Takalar					
	Kab. Gowa					
	Kab. Sinjai					
	Kab. Bone					
	Kab. Maros					
	Kab. Pang. Kepulauan					
	Kab. Barru					
	Kab. Soppeng					
	Kab. Wajo					
	Kab. Sid. Rappang					
	Kab. Pinrang					
	Kab. Enrekang					
	Kab. Luwu	94	216	0	0	1,456
	Kab. Tana Toraja					
	Kab. Pole. Mamasa					
	Kab. Majene					
Kab. Mamuju	4,927	6,080	6,104	2,287	6,773	
Kod. Ujung Pandang						
Kod. Pare-Pare						
South Sulawesi	5,021	6,296	6,104	2,287	8,229	

Source: Data and Information from Regional Transmigration Office

### 3.1.4 Economic Situation

#### (1) Central Sulawesi

##### 1) General

The GRDP of the province excluding oil/gas production increased at an annual growth rate of 8.7% on average from 1988 to 1993, well above the national average (7.7%) recorded during the same period. Most revenues of the province are derived from agriculture, accounting for about 45% of the GRDP in 1993. The growth rate of agriculture is still high in comparison to the national average rate.

##### 2) Dominant Sector

###### *Agricultural Sector (45.18% of GRDP in 1993)*

The income of Central Sulawesi is dominated by the agricultural sector. The main products of this province are copra, clove, wood, rattan, fish and quarry material. Plantation products for inter-island trade such as copra and cloves are shipped to Java. Forestry products such as wood and rattan are basically processed in this area before being exported or shipped to other islands. As a part of development of the handicraft industry, ebony (black wood) is being considered as a product to be processed (as handicraft) before shipping. Large-scale agricultural areas will be developed in Kabupaten Poso, Toli-Toli and Banggai.

##### 3) High-Growth Sector

The highest growth sectors during the five-year period between 1988 and 1993 were Electricity, Gas, and Water (13.9% per year on average), followed by Agriculture (10.8%), Trade, Restaurant & Hotel (8.8%), Transport & Communication (8.5%), and Construction (8.2%). Reference is made to Table 3-1-4, Table 3-1-5 and Figure 3-1-2.

**Table 3-1-4 GRDP by Industrial Origin, 1988 and 1990 at 1983 Constant Prices (Rp. Billion)**

Central Sulawesi					
Industrial Origin	1988	% Share	1993	% Share	Annual Growth Rate, %
1. Agriculture	199,581	41.00	333,374	45.18	10.81
2. Mining & Quarrying	12,095	2.48	17,368	2.35	7.51
3. Manufacturing	34,582	7.11	45,180	6.12	5.46
4. Electricity, gas, water	1,914	0.40	3,726	0.50	13.90
5. Construction	32,629	6.64	47,959	6.5	8.22
6. Trade, hotels, restaurant	63,044	12.95	96,370	13.06	8.86
7. Transport, communication	45,152	9.41	69,032	9.35	8.54
8. Banking, other financial intermediaries	11,474	2.36	14,667	1.99	5.03
9. Ownership of dwelling	18,320	3.67	22,067	2.99	3.79
10. Public administration	57,628	11.84	75,853	10.28	5.65
11. Services	9,921	2.04	12,326	1.67	4.44
Non oil/gas product	486,776	100.00	737,922	100.00	8.68
Oil/gas product	0	0	0	0	0
GRDP	486,776	100.00	737,922	100.00	8.68

Source: Central Bureau of Statistics, *Regional Income of Provinces in Indonesia by Industrial Origin*

**Table 3-1-5 Gross Domestic Product by Industrial Origin at 1983  
Constant Market Prices (Million Rp.) Central Sulawesi**

INDUSTRIAL ORIGIN	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
1 AGRICULTURE	151,795	161,235	168,016	187,690	199,581	224,104	245,585	269,902	297,911	333,374
1.1 FARM FOOD CROPS	74,132	79,989	75,991	80,630	89,974	97,903	105,106	112,341	119,901	135,823
1.2 FARM NON-FOOD CROPS	44,421	47,273	55,158	66,808	72,376	77,691	85,917	94,252	102,720	105,994
1.3 FSTATE CROPS	1,359	1,321	598	838	651	721	790	439	549	742
1.4 LIVESTOCK	13,962	14,140	13,644	13,931	14,872	16,234	18,693	22,831	29,198	36,544
1.5 FORESTRY	4,842	5,528	7,715	10,010	5,524	9,350	9,713	9,183	9,571	10,450
1.6 FISHERY	13,102	12,984	14,919	15,473	16,184	22,205	25,366	30,853	35,973	43,911
2 MINING & QUARRYING	9,877	10,623	11,502	10,055	12,095	14,163	14,992	15,829	16,822	17,368
2.1 CRUDE PETROLEUM & NATURAL GAS	0	0	0	0	0	0	0	0	0	0
2.2 NON CRUDE PETROLEUM & NATURAL GAS	0	0	0	0	0	0	0	0	0	0
2.3 QUARRYING	9,877	10,623	11,502	10,055	12,095	14,163	14,992	15,829	16,822	17,368
3 MANUFACTURING INDUSTRIES	23,422	25,079	29,572	32,670	34,634	36,582	40,185	42,123	43,467	45,180
3.1 LARGE & MEDIUM SCALE INDUSTRIES	16,168	16,965	18,885	20,817	18,065	19,122	19,821	20,603	21,085	21,579
3.2 SMALL SCALE & HOME INDUSTRIES	7,254	8,114	10,687	11,853	16,549	17,460	20,364	21,520	22,381	23,601
3.3 PETROLEUM REFINERY	0	0	0	0	0	0	0	0	0	0
3.4 LNG	0	0	0	0	0	0	0	0	0	0
4 ELECT., GAS & WATER SUPPLY	1,111	1,094	1,357	1,847	1,944	2,162	2,521	2,683	3,341	3,726
4.1 ELECTRICITY	912	980	1,223	1,683	1,806	2,040	2,314	2,432	3,021	3,194
4.2 GAS	0	0	0	0	0	0	0	0	0	0
4.3 WATER SUPPLY	199	114	134	164	138	122	207	251	320	532
5 CONSTRUCTION	26,725	26,854	29,977	26,953	32,306	34,629	40,345	43,616	46,114	47,959
6 TRADE, RESTAURANT & HOTEL	47,178	51,580	56,865	60,006	63,044	67,006	71,951	82,652	89,889	96,370
6.1 WHOLESALE & RETAIL TRADE	46,167	50,531	55,721	58,773	61,763	65,577	70,402	80,494	88,022	93,710
6.2 RESTAURANT	356	331	416	497	533	587	926	681	734	835
6.3 HOTELS	645	658	726	736	749	842	1,022	1,022	1,133	1,825
7 TRANSPORT & COMMUNICATION	37,956	38,011	38,073	42,428	45,829	49,152	52,827	56,022	62,341	69,032
7.1 RAILWAY TRANSPORT	0	0	0	0	0	0	0	0	0	0
7.2 ROAD TRANSPORT	27,800	29,199	28,766	32,526	34,045	35,654	38,673	41,048	43,909	49,494
7.3 INLAND WATER TRANSPORT	0	0	0	0	0	0	0	0	0	0
7.4 SEA TRANSPORT	1,707	1,685	2,045	2,349	3,015	3,968	4,673	5,065	6,634	7,110
7.5 AIR TRANSPORT	4,585	3,870	3,765	3,446	4,151	4,095	3,654	3,550	3,970	3,740
7.6 SERVICE ALLIED TO TRANSPORT	2,848	1,906	2,119	2,802	3,068	3,639	3,796	4,028	5,138	5,840
7.7 COMMUNICATION	1,010	1,151	1,384	1,505	1,550	1,790	2,031	2,311	2,630	2,848
8 BANKING & OTHER FINANCIAL INTERMEDIARIES	6,360	6,305	7,007	7,358	11,474	10,551	10,792	11,553	12,484	14,667
9 OWNERSHIP OF DWELLING	15,190	15,602	16,314	17,084	18,320	19,332	20,578	21,741	21,896	22,067
10 PUBLIC ADM. & DEFENCE	48,028	48,974	52,808	53,890	57,628	61,415	65,618	68,947	72,808	75,853
11 SERVICE	6,790	7,266	7,968	9,463	9,921	10,353	10,575	11,005	11,609	12,326
12 TOTAL GDP	374,432	392,623	419,459	449,444	486,776	529,449	575,969	626,073	678,682	737,922
13 TOTAL OIL, GAS & ITS PRODUCTS	0	0	0	0	0	0	0	0	0	0
14 TOTAL WITHOUT OIL, GAS & ITS PRODUCTS	374,432	392,623	419,459	449,444	486,776	529,449	575,969	626,073	678,682	737,922

SOURCE: REGIONAL INCOME OF PROVINCES IN INDONESIA BY INDUSTRIAL ORIGIN, BIRO PUSAT STATISTIK, JAKARTA INDONESIA

**GROSS DOMESTIC PRODUCT BY INDUSTRIAL ORIGIN AT 1983 CONSTANT MARKET PRICES (MILLION RP.)**

INDUSTRIAL ORIGIN	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
1 AGRICULTURE	151,795	161,235	168,016	187,690	199,581	224,104	245,585	269,902	297,911	333,374
2 MINING & QUARRYING	9,877	10,623	11,502	10,055	12,095	14,163	14,992	15,829	16,822	17,368
3 MANUFACTURING INDUSTRIES	23,422	25,079	29,572	32,670	34,634	36,582	40,185	42,123	43,467	45,180
4 ELECT., GAS & WATER SUPPLY	1,111	1,094	1,357	1,847	1,944	2,162	2,521	2,683	3,341	3,726
5 CONSTRUCTION	26,725	26,854	29,977	26,953	32,306	34,629	40,345	43,616	46,114	47,959
6 TRADE, RESTAURANT & HOTEL	47,178	51,580	56,865	60,006	63,044	67,006	71,951	82,652	89,889	96,370
7 TRANSPORT & COMMUNICATION	37,956	38,011	38,073	42,428	45,829	49,152	52,827	56,022	62,341	69,032
8 BANKING & OTHER FINANCIAL INTERMEDIARIES	6,360	6,305	7,007	7,358	11,474	10,551	10,792	11,553	12,484	14,667
9 OWNERSHIP OF DWELLING	15,190	15,602	16,314	17,084	18,320	19,332	20,578	21,741	21,896	22,067
10 PUBLIC ADM. & DEFENCE	48,028	48,974	52,808	53,890	57,628	61,415	65,618	68,947	72,808	75,853
11 SERVICE	6,790	7,266	7,968	9,463	9,921	10,353	10,575	11,005	11,609	12,326
12 TOTAL GDP	374,432	392,623	419,459	449,444	486,776	529,449	575,969	626,073	678,682	737,922
13 TOTAL OIL, GAS & ITS PRODUCTS	0	0	0	0	0	0	0	0	0	0
14 TOTAL WITHOUT OIL, GAS & ITS PRODUCTS	374,432	392,623	419,459	449,444	486,776	529,449	575,969	626,073	678,682	737,922

SOURCE: REGIONAL INCOME OF PROVINCES IN INDONESIA BY INDUSTRIAL ORIGIN, BIRO PUSAT STATISTIK, JAKARTA INDONESIA

**GROWTH RATE OF GROSS DOMESTIC PRODUCT BY INDUSTRIAL ORIGIN AT 1983 CONSTANT MARKET PRICES**

INDUSTRIAL ORIGIN	1984-1985	1985-1986	1986-1987	1987-1988	1988-1989	1989-1990	1990-1991	1991-1992	1992-1993	1983-1993
1 AGRICULTURE	6.22%	4.21%	11.71%	6.34%	12.29%	9.59%	9.90%	10.38%	11.90%	10.81%
2 MINING & QUARRYING	7.55%	8.27%	-12.58%	20.29%	17.10%	5.85%	5.58%	6.27%	3.25%	7.51%
3 MANUFACTURING INDUSTRIES	7.07%	17.92%	10.43%	6.01%	5.62%	9.85%	4.82%	3.19%	3.94%	5.46%
4 ELECT., GAS & WATER SUPPLY	-1.53%	24.04%	36.11%	5.25%	11.21%	16.60%	6.43%	24.52%	11.52%	13.90%
5 CONSTRUCTION	0.48%	11.63%	-10.09%	19.86%	7.19%	16.51%	8.11%	5.73%	4.00%	8.22%
6 TRADE, RESTAURANT & HOTEL	9.33%	10.25%	5.52%	5.06%	6.28%	7.38%	14.81%	8.76%	7.21%	8.60%
7 TRANSPORT & COMMUNICATION	0.14%	0.16%	11.44%	8.02%	7.25%	7.45%	6.05%	11.28%	10.73%	8.54%
8 BANKING & OTHER FINANCIAL INTERMEDIARIES	-0.86%	11.13%	5.01%	55.94%	8.04%	2.28%	7.05%	8.06%	17.49%	5.03%
9 OWNERSHIP OF DWELLING	2.71%	4.56%	4.72%	7.23%	5.52%	6.45%	5.65%	0.71%	0.78%	3.79%
10 PUBLIC ADM. & DEFENCE	1.97%	7.83%	2.05%	6.94%	6.57%	6.84%	5.07%	5.60%	4.18%	5.65%
11 SERVICE	7.01%	9.66%	18.76%	4.84%	4.35%	2.14%	4.07%	5.43%	6.18%	4.44%
12 TOTAL GDP	4.86%	6.84%	7.15%	8.31%	8.77%	8.79%	8.70%	8.40%	8.73%	8.68%
13 TOTAL OIL, GAS & ITS PRODUCTS	---	---	---	---	---	---	---	---	---	---
14 TOTAL WITHOUT OIL, GAS & ITS PRODUCTS	4.86%	6.84%	7.15%	8.31%	8.77%	8.79%	8.70%	8.40%	8.73%	8.68%

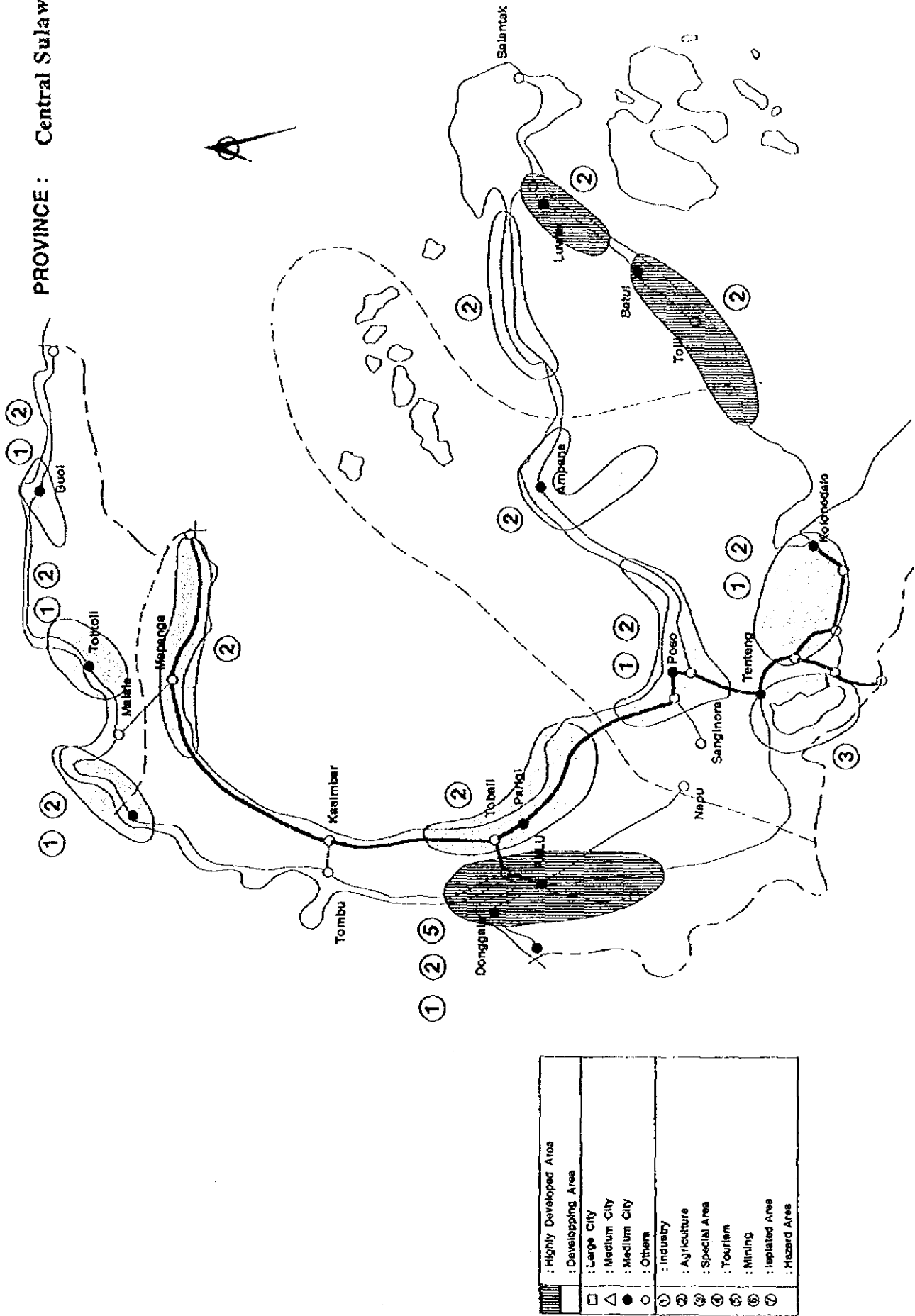
SOURCE: REGIONAL INCOME OF PROVINCES IN INDONESIA BY INDUSTRIAL ORIGIN, BIRO PUSAT STATISTIK, JAKARTA INDONESIA

**INDUSTRIAL STRUCTURE**

INDUSTRIAL ORIGIN	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
1 AGRICULTURE	49.54%	41.07%	40.05%	41.76%	41.00%	42.33%	42.64%	43.11%	43.90%	45.18%
2 MINING & QUARRYING	2.64%	2.71%	2.74%	2.24%	2.48%	2.68%	2.59%	2.48%	2.48%	2.35%
3 MANUFACTURING INDUSTRIES	6.26%	6.39%	7.05%	7.27%	7.11%	6.91%	6.98%	6.73%	6.40%	6.12%
4 ELECT., GAS & WATER SUPPLY	0.30%	0.28%	0.32%	0.41%	0.40%	0.41%	0.44%	0.43%	0.49%	0.50%
5 CONSTRUCTION	7.14%	6.84%	7.15%	6.00%	6.64%	6.54%	7.00%	6.97%	6.79%	6.50%
6 TRADE, RESTAURANT & HOTEL	12.60%	13.14%	13.56%	13.35%	12.95%	12.66%	12.49%	13.20%	13.24%	13.06%
7 TRANSPORT & COMMUNICATION	10.14%	9.68%	9.08%	9.44%	9.41%	9.28%	8.95%	9.19%	9.19%	9.35%
8 BANKING & OTHER FINANCIAL INTERMEDIARIES	1.70%	1.61%	1.67%	1.64%	2.36%	1.99%	1.87%	1.85%	1.84%	1.99%
9 OWNERSHIP OF DWELLING	4.06%	3.97%	3.89%	3.80%	3.76%	3.65%	3.57%	3.47%	3.29%	2.99%
10 PUBLIC ADM. & DEFENCE	12.83%	12.47%	12.59%	11.99%	11.84%	11.60%	11.39%	11.01%	10.73%	10.28%
11 SERVICE	1.81%	1.85%	1.90%	2.11%	2.04%	1.96%	1.84%	1.76%	1.71%	1.67%
12 TOTAL GDP	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
13 TOTAL OIL, GAS & ITS PRODUCTS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
14 TOTAL WITHOUT OIL, GAS & ITS PRODUCTS	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

SOURCE: REGIONAL INCOME OF PROVINCES IN INDONESIA BY INDUSTRIAL ORIGIN, BIRO PUSAT STATISTIK, JAKARTA INDONESIA

PROVINCE : Central Sulawesi



Source: Structure Plan of the Province by Central Sulawesi Bappeda

Figure 3-1-2 Present Situation of Land Use (Central Sulawesi)

## (2) Southeast Sulawesi

### 1) General

The GRDP of the province excluding oil/gas products increased at an annual growth rate of 9.1 percent on average between 1988 and 1993, well above the national average rate recorded during the same period. The economy is dominated by primary industry, which accounted for about 44% of the GRDP in 1993.

### 2) Dominant Sector

#### *Agricultural Sector (43.62% of GRDP in 1993)*

Similar to other provinces in Sulawesi, the economy of Southeast Sulawesi has been dominated by the agricultural sector. The agricultural sector holds the greatest share of provincial economy as shown in Table 3-1-6. The main products of this sector are rice, cacao, water apple, cotton and wood. Plantation export commodities are copra, cotton, rattan, sawn wood, water apple, cacao and clove.

### 3) High-Growth Sector

The highest growth sectors during the last five-year period between 1988 and 1993 were Electricity, Gas, and Water (14.5% per year on average), followed by Banking and other financial intermediaries sector (13.9%), Manufacturing (13.6%), Construction (13.1%), Services (10.6%), and Trade, Hotels & Restaurant (10.5%). Reference is made to Table 3-1-6, Table 3-1-7 and Figure 3-1-3.

**Table 3-1-6 GRDP by Industrial Origin, 1988 and 1993 at 1983 Constant Prices (Rp.Million)**

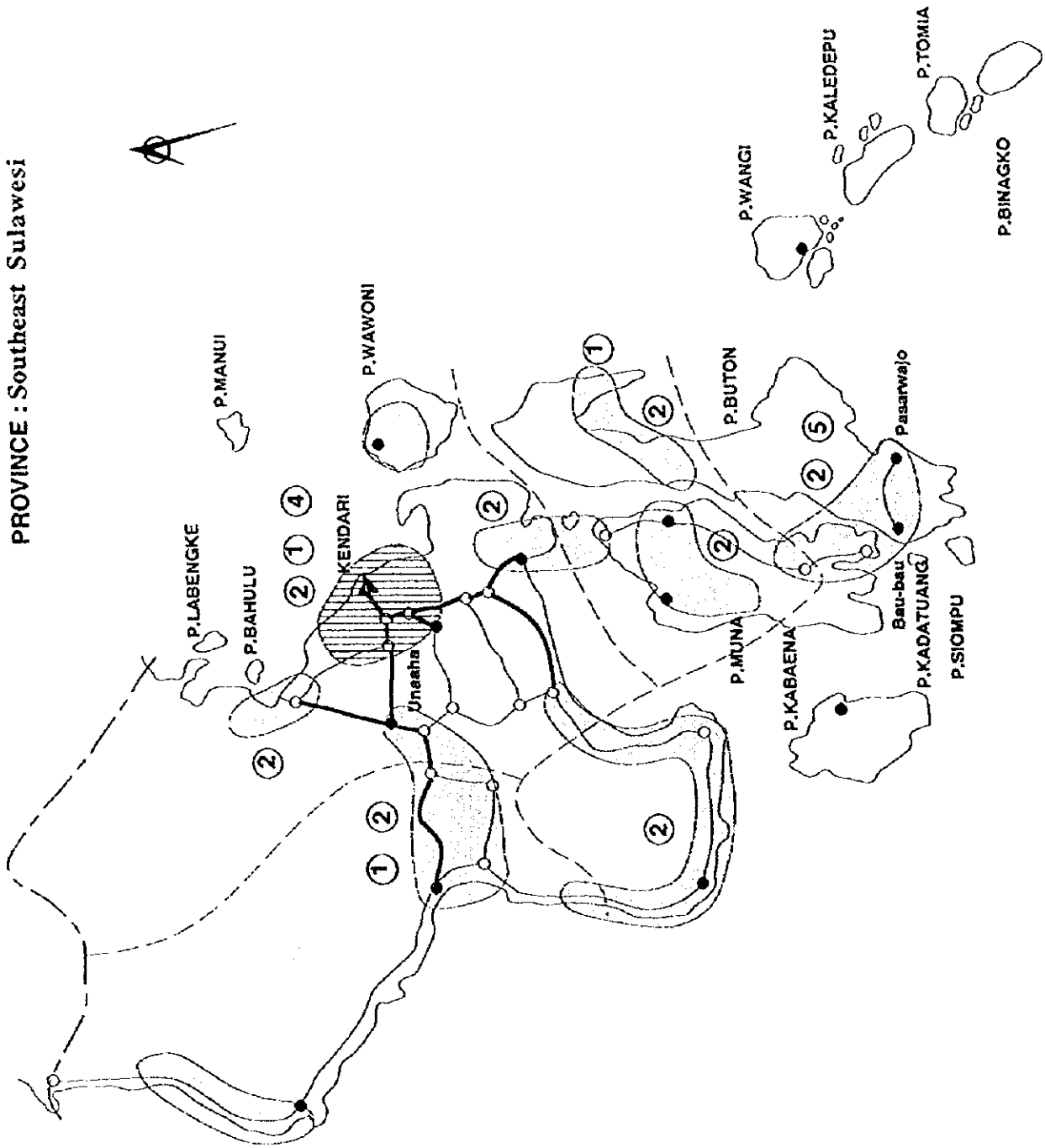
Southeast Sulawesi					
Industrial Origin	1988	% Share	1993	% Share	Annual Growth Rate, %
1.Agriculture	179025	42.55	284235	43.62	9.69
2.Mining & Quarrying	23330	5.54	28405	4.36	4.02
3.Manufacturing	7792	1.85	14769	2.27	13.64
4.Electricity,gas,water	1924	0.46	3780	0.58	14.46
5.Construction	12623	3.00	23282	3.57	13.02
6.Trade,hotels,restaurant	54477	12.95	89880	13.79	10.53
7.Transport,communication	50219	11.93	64029	9.83	4.98
8.Banking, other financial intermediaries	3641	0.87	6987	1.07	13.92
9.Ownership of dwelling	16826	4.00	20444	3.14	3.97
10.Public administration	67210	15.97	111632	17.13	10.68
11.Services	3711	0.88	4224	0.65	2.62
Non oil/gas product	420778	100.00	651667	100.00	9.14
Oil gas product	0	0	0	0	0
GRDP	420778	100.00	651667	100.00	9.14

Source: Central Bureau of Statistics, *Regional Income of Provinces in Indonesia by Industrial Origin*





PROVINCE : Southeast Sulawesi



	: Highly Developed Area
	: Developing Area
	: Large City
	: Medium City
	: Medium City
	: Others
	: Industry
	: Agriculture
	: Special Area
	: Tourism
	: Mining
	: Isolated Area
	: Hazard Area

Source: Planning Atlas of the Province by Southeast Sulawesi Bappeda

Figure 3-1-3 Present Situation of Land Use (Southeast Sulawesi)

### (3) North Sulawesi

#### 1) General

From 1988 to 1993, the GRDP of the province excluding oil/gas products increased at an annual growth rate of 8.6 percent per year on average, above the national average rate of 7.7% recorded during the same period. The economy is dominated by the agricultural sector which accounted for about 38% of the GRDP in 1993.

#### 2) Dominant Sector

##### *Agricultural Sector (38.43% of GRDP in 1993)*

The agricultural sector in North Sulawesi province, similar to other provinces in Sulawesi is the greatest contributor of provincial GRDP. Table 3-1-8 shows that the contribution of the agricultural sector was 38.0% of the total GRDP in 1993. Land area for agriculture is located in Marisa, Paguyaman, Dumoga and Sangkup (for food crops in wetland) and Kabupaten Minahasa, Gorontalo and all other land area parallel to the Trans Sulawesi road (for food crops in dry land). The province's agriculture is characterized by its clove production, which accounted for some 30% of Indonesian clove production in 1990.

#### 3) High-Growth Sector

The highest growth sectors during the last five years (1988-1993) were Mining & Quarrying (17.8% per year on average), followed by Manufacturing (11.9%), Electricity, Gas, and Water sector (11.0%), and Agriculture (10.4%). Reference is made to Table 3-1-8 and Table 3-1-9.

**Table 3-1-8 GRDP by Industrial Origin, 1988 and 1993 at 1983 Constant Prices (Rp. Million)**

North Sulawesi					
Industrial Origin	1988	% Share	1993	% Share	Annual Growth Rate, %
1. Agriculture	292,095	35.40	479,827	38.43	10.44
2. Mining & Quarrying	6,385	0.77	14,515	1.16	17.85
3. Manufacturing	40,111	4.86	70,433	5.61	11.92
4. Electricity, gas, water	7,978	0.97	13,475	1.08	11.05
5. Construction	45,828	5.55	64,302	5.15	7.01
6. Trade, hotels, restaurant	110,256	13.36	175,869	14.09	9.79
7. Transport, communication	102,477	12.42	157,256	12.6	8.91
8. Banking, other financial intermediaries	18,388	2.23	29,807	2.39	10.14
9. Ownership of dwelling	23,088	2.80	28,858	2.31	4.56
10. Public administration	127,149	15.41	151,111	12.10	3.51
11. Services	51,270	6.21	62,957	5.04	4.20
Non oil/gas product	825,025	100.00	1,248,420	100.00	8.64
Oil gas product	0	0	0	0	0
GRDP	825,025	100.00	1,248,240	100.00	8.64

Source: Central Bureau of Statistics, *Regional Income of Provinces in Indonesia by Industrial Origin*

**Table 3-1-9 Gross Domestic Product by Industrial Origin at 1983  
Constant Market Prices (Million Rp.) North Sulawesi**

INDUSTRIAL ORIGIN		1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
1	AGRICULTURE	224,218	234,223	249,439	270,533	292,095	307,569	354,017	398,920	442,067	479,827
2	FARM FOOD CROPS	112,388	117,783	127,585	128,933	140,462	155,131	166,764	180,702	188,856	201,685
12	FARM NON FOOD CROPS	55,706	60,054	62,409	74,558	83,217	76,055	100,004	123,204	146,026	157,639
13	ESTATE CROPS	0	0	0	0	0	0	0	0	0	0
14	LIVE STOCK	33,341	30,547	30,739	34,666	34,006	36,434	38,279	40,454	43,300	47,067
15	FORESTRY	1,194	1,816	4,057	6,936	6,936	10,112	14,510	17,346	22,392	28,067
16	FISHERY	24,589	24,023	24,643	25,410	26,814	29,837	34,460	37,214	41,493	45,369
2	MINING & QUARRYING	2,906	3,182	3,546	4,204	6,385	7,166	8,492	9,993	11,886	14,515
21	CRUDE PETROLEUM & NATURAL GAS	0	0	0	0	0	0	0	0	0	0
22	NON CRUDE PETROLEUM & NATURAL GAS	282	272	1,134	1,731	0	0	0	0	183	213
23	QUARRYING	2,624	2,910	2,412	2,473	6,385	7,166	8,492	9,993	11,703	14,302
3	MANUFACTURING INDUSTRIES	38,377	40,073	37,918	39,227	40,111	42,739	45,973	50,377	61,207	70,433
31	LARGE & MEDIUM SCALE INDUSTRIES	16,109	18,017	15,823	16,634	16,990	18,806	20,404	24,010	32,212	38,876
32	SMALL SCALE & HOME INDUSTRIES	22,268	22,056	22,095	22,593	23,121	23,843	25,569	26,367	28,995	31,555
33	PETROLEUM REFINAERY	0	0	0	0	0	0	0	0	0	0
34	ING	0	0	0	0	0	0	0	0	0	0
4	ELECT. GAS & WATER SUPPLY	5,633	6,122	6,839	7,221	7,978	8,662	9,148	10,507	12,172	13,475
41	ELECTRICITY	4,534	4,878	5,492	5,800	7,978	8,662	9,148	10,507	12,172	13,475
42	GAS	0	0	0	0	0	0	0	0	0	0
43	WATER SUPPLY	1,099	1,244	1,347	1,421	0	0	0	0	0	0
5	CONSTRUCTION	44,652	49,331	44,495	44,576	45,828	47,080	48,516	51,487	57,061	64,302
6	TRADE, RESTAURANT & HOTEL	92,193	94,374	97,304	102,244	110,256	116,944	126,928	138,556	154,588	175,869
61	WHOLESALE & RETAIL TRADE	86,760	88,429	90,965	95,687	103,409	109,666	119,273	130,426	145,621	166,093
62	RESTAURANT	4,503	5,015	5,345	5,445	5,543	5,904	6,207	6,601	7,286	7,866
63	HOTELS	924	930	990	1,117	1,304	1,374	1,448	1,529	1,681	1,910
7	TRANSPORT & COMMUNICATION	81,221	83,422	87,116	93,308	102,477	108,343	116,053	125,569	141,839	157,256
71	RAILWAY TRANSPORT	0	0	0	0	0	0	0	0	0	0
72	ROAD TRANSPORT	66,387	67,733	67,747	69,154	74,000	76,000	79,112	83,397	92,415	100,861
73	INLAND WATER TRANSPORT	0	0	0	0	0	0	0	0	0	0
74	SEA TRANSPORT	7,573	8,489	11,428	15,889	13,433	22,891	26,923	31,536	37,547	43,569
75	AIR TRANSPORT	3,533	3,514	4,129	4,250	4,471	4,612	4,840	5,137	5,926	6,419
76	SERVICE ALLIED TO FINANCIAL	0	0	0	0	0	0	0	0	0	0
77	COMMUNICATION	3,728	3,686	3,812	4,015	4,463	4,750	5,177	5,499	5,951	6,377
8	BANKING & OTHER FINANCIAL INTERMEDIARIES	12,646	13,668	11,129	13,802	18,388	26,846	33,413	39,276	26,924	29,807
9	OWNERSHIP OF DWELLING	20,454	20,883	21,244	22,148	23,088	24,067	25,093	26,178	27,320	28,858
10	PUBLIC ADM. & DEFENCE	113,232	115,496	121,447	125,645	127,149	130,904	134,751	138,755	144,295	151,111
11	SERVICE	45,749	46,778	49,461	50,116	51,270	52,911	54,827	56,269	59,509	62,967
12	TOTAL GDP	681,281	704,550	730,008	773,031	825,025	873,285	957,211	1,045,887	1,138,868	1,248,420
13	TOTAL OIL, GAS & ITS PRODUCTS	0	0	0	0	0	0	0	0	0	0
14	TOTAL WITHOUT OIL, GAS & ITS PRODUCTS	681,281	704,550	730,008	773,031	825,025	873,285	957,211	1,045,887	1,138,868	1,248,420

SOURCE: REGIONAL INCOME OF PROVINCES IN INDONESIA BY INDUSTRIAL ORIGIN, BIRO PUSAT STATISTIK, JAKARTA INDONESIA

**GROSS DOMESTIC PRODUCT BY INDUSTRIAL ORIGIN AT 1983 CONSTANT MARKET PRICES (MILLION RP.)**

INDUSTRIAL ORIGIN		1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
1	AGRICULTURE	224,218	234,223	249,439	270,533	292,095	307,569	354,017	398,920	442,067	479,827
2	MINING & QUARRYING	2,906	3,182	3,546	4,204	6,385	7,166	8,492	9,993	11,886	14,515
3	MANUFACTURING INDUSTRIES	38,377	40,073	37,918	39,227	40,111	42,739	45,973	50,377	61,207	70,433
4	ELECT. GAS & WATER SUPPLY	5,633	6,122	6,839	7,221	7,978	8,662	9,148	10,507	12,172	13,475
5	CONSTRUCTION	44,652	49,331	44,495	44,576	45,828	47,080	48,516	51,487	57,061	64,302
6	TRADE, RESTAURANT & HOTEL	92,193	94,374	97,304	102,244	110,256	116,944	126,928	138,556	154,588	175,869
7	TRANSPORT & COMMUNICATION	81,221	83,422	87,116	93,308	102,477	108,343	116,053	125,569	141,839	157,256
8	BANKING & OTHER FINANCIAL INTERMEDIARIES	12,646	13,668	11,129	13,802	18,388	26,846	33,413	39,276	26,924	29,807
9	OWNERSHIP OF DWELLING	20,454	20,883	21,244	22,148	23,088	24,067	25,093	26,178	27,320	28,858
10	PUBLIC ADM. & DEFENCE	113,232	115,496	121,447	125,645	127,149	130,904	134,751	138,755	144,295	151,111
11	SERVICE	45,749	46,778	49,461	50,116	51,270	52,911	54,827	56,269	59,509	62,967
12	TOTAL GDP	681,281	704,550	730,008	773,031	825,025	873,285	957,211	1,045,887	1,138,868	1,248,420
13	TOTAL OIL, GAS & ITS PRODUCTS	0	0	0	0	0	0	0	0	0	0
14	TOTAL WITHOUT OIL, GAS & ITS PRODUCTS	681,281	704,550	730,008	773,031	825,025	873,285	957,211	1,045,887	1,138,868	1,248,420

SOURCE: REGIONAL INCOME OF PROVINCES IN INDONESIA BY INDUSTRIAL ORIGIN, BIRO PUSAT STATISTIK, JAKARTA INDONESIA

**GROWTH RATE OF GROSS DOMESTIC PRODUCT BY INDUSTRIAL ORIGIN AT 1983 CONSTANT MARKET PRICES**

INDUSTRIAL ORIGIN		1984-1985	1985-1986	1986-1987	1987-1988	1988-1989	1989-1990	1990-1991	1991-1992	1992-1993	1988-1993
1	AGRICULTURE	4.45%	6.50%	8.46%	7.97%	5.30%	15.10%	12.68%	10.82%	8.54%	10.44%
2	MINING & QUARRYING	9.50%	11.44%	18.56%	51.88%	12.23%	18.50%	17.68%	18.94%	22.12%	17.85%
3	MANUFACTURING INDUSTRIES	4.42%	-5.38%	3.45%	2.25%	6.55%	7.57%	9.58%	21.50%	15.07%	11.92%
4	ELECT. GAS & WATER SUPPLY	8.68%	11.71%	5.59%	10.49%	8.57%	5.61%	14.86%	15.85%	10.70%	11.05%
5	CONSTRUCTION	10.48%	-9.80%	0.13%	2.81%	2.73%	3.06%	6.12%	10.83%	12.63%	7.01%
6	TRADE, RESTAURANT & HOTEL	2.37%	3.10%	5.08%	7.84%	6.07%	8.54%	9.16%	11.57%	13.77%	9.79%
7	TRANSPORT & COMMUNICATION	2.71%	4.43%	7.11%	9.83%	5.72%	7.12%	8.20%	12.96%	10.87%	8.94%
8	BANKING & OTHER FINANCIAL INTERMEDIARIES	-15.66%	5.00%	23.31%	33.16%	45.96%	24.49%	17.55%	-31.45%	10.71%	10.14%
9	OWNERSHIP OF DWELLING	2.10%	1.73%	4.26%	4.24%	4.26%	4.32%	4.36%	4.36%	5.63%	4.56%
10	PUBLIC ADM. & DEFENCE	2.09%	5.15%	3.46%	1.20%	3.00%	2.89%	2.97%	3.99%	4.72%	3.51%
11	SERVICE	2.25%	5.74%	1.32%	2.36%	3.20%	3.62%	2.63%	5.76%	5.81%	4.20%
12	TOTAL GDP	3.42%	3.61%	5.89%	6.73%	5.85%	9.61%	9.26%	8.89%	9.62%	8.64%
13	TOTAL OIL, GAS & ITS PRODUCTS	...	...	...	...	...	...	...	...	...	...
14	TOTAL WITHOUT OIL, GAS & ITS PRODUCTS	3.42%	3.61%	5.89%	6.73%	5.85%	9.61%	9.26%	8.89%	9.62%	8.64%

SOURCE: REGIONAL INCOME OF PROVINCES IN INDONESIA BY INDUSTRIAL ORIGIN, BIRO PUSAT STATISTIK, JAKARTA INDONESIA

**INDUSTRIAL STRUCTURE**

INDUSTRIAL ORIGIN		1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
1	AGRICULTURE	32.91%	33.24%	34.17%	35.00%	35.40%	35.22%	36.98%	38.14%	38.82%	38.43%
2	MINING & QUARRYING	0.43%	0.45%	0.49%	0.54%	0.77%	0.82%	0.89%	0.96%	1.04%	1.16%
3	MANUFACTURING INDUSTRIES	5.63%	5.69%	5.19%	5.07%	4.86%	4.89%	4.80%	4.82%	5.37%	5.64%
4	ELECT. GAS & WATER SUPPLY	0.83%	0.87%	0.94%	0.93%	0.97%	0.99%	0.96%	1.00%	1.07%	1.08%
5	CONSTRUCTION	6.55%	7.00%	6.10%	5.77%	5.55%	5.39%	5.07%	4.92%	5.01%	5.15%
6	TRADE, RESTAURANT & HOTEL	13.53%	13.39%	13.33%	13.23%	13.36%	13.39%	13.26%	13.25%	13.57%	14.09%
7	TRANSPORT & COMMUNICATION	11.92%	11.84%	11.93%	12.07%	12.42%	12.41%	12.12%	12.61%	12.45%	12.60%
8	BANKING & OTHER FINANCIAL INTERMEDIARIES	1.86%	1.54%	1.53%	1.73%	2.23%	3.07%	3.49%	3.76%	2.36%	2.39%
9	OWNERSHIP OF DWELLING	3.00%	2.96%	2.91%	2.87%	2.80%	2.76%	2.62%	2.50%	2.40%	2.31%
10	PUBLIC ADM. & DEFENCE	16.62%	16.39%	16.64%	16.25%	15.41%	15.00%	14.08%	13.27%	12.67%	12.16%
11	SERVICE	6.72%	6.64%	6.78%	6.48%	6.21%	6.06%	5.73%	5.38%	5.23%	5.04%
12	TOTAL GDP	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
13	TOTAL OIL, GAS & ITS PRODUCTS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
14	TOTAL WITHOUT OIL, GAS & ITS PRODUCTS	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

SOURCE: REGIONAL INCOME OF PROVINCES IN INDONESIA BY INDUSTRIAL ORIGIN, BIRO PUSAT STATISTIK, JAKARTA INDONESIA

#### (4) South Sulawesi

##### 1) General

The GRDP of the province excluding oil/gas products increased at an annual growth rate of 7.6 percent on average from 1988 to 1993, slightly below the national average rate recorded during the same period. The economy is dominated by primary industry (agriculture and fishery), which accounted for about 40% of the GRDP in 1993.

##### 2) Dominant Sector

###### *Agricultural Sector (40.86% of GRDP in 1993)*

Agricultural sector makes the greatest contribution to the South Sulawesi GRDP, although its share decreased from 42% in 1988 to 40% in 1993. The potential of the agricultural sector in South Sulawesi is dominated by forestry with a land area in 1990 of 3,573,951 Ha (51.19%), while land area for paddy fields is 563,576 Ha (9.02%) and for plantation is 443,414 Ha (7.09%). The locations are scattered throughout every Kabupaten in South Sulawesi province.

##### 3) High-Growth Sector

The highest growth sectors during the last five years (1988-1993) were Manufacturing (12.8% per year on average), followed by Trade, Hotels & Restaurant (8.8%), Electricity, Gas, and Water (8.3%), Construction (8.1%), Transport & Communication sector (7.6%), and Services (7.4%). Reference is made to Table 3-1-10 and Table 3-1-11.

**Table 3-1-10 GRDP by Industrial Origin, 1988, and 1993 at 1983 Constant Prices (Rp.Million)**

South Sulawesi					
Industrial Origin	1988	% Share	1993	% Share	Annual Growth Rate, %
1.Agriculture	1,037,848	42.36	1,416,439	40.86	6.86
2.Mining & Quarrying	62,568	2.55	79,205	2.24	4.83
3.Manufacturing	178,598	7.29	325,428	9.49	12.75
4.Electricity, gas, water	27,638	1.13	41,269	1.17	8.35
5.Construction	91,400	3.73	134,921	3.81	8.10
6.Trade, hotels, restaurant	421,060	17.19	643,139	18.17	8.84
7.Transport, communication	223,048	9.10	321,924	9.09	7.62
8.Banking, other financial intermediaries	39,895	1.63	50,001	1.41	4.62
9.Ownership of dwelling	107,282	4.38	125,189	3.54	3.14
10.Public administration	236,235	9.64	338,785	9.57	7.48
11.Services	24,408	1.00	33,596	0.95	6.60
Non oil/gas product	2,449,971	100.00	3,539,806	100.00	7.64
Oil/gas product	0	0	0	0	0
GRDP	2,449,971	100.00	3,539,806	100.00	7.64

Source: Central Bureau of Statistics, *Regional Income of Provinces in Indonesia by Industrial Origin*

The GRDP by Kabupaten is shown in Table 3-1-12 for each province in the study area.



Table 3-1-12 GRDP by Kabupaten in Study Area

Province	Kabupaten	1983 Prices				1993 Prices	
		1989	1990	1991	1992	1993	1994
Central Sulawesi	Kab. Luwuk/Banggai	n/a	n/a	n/a	n/a	297,958	303,016
	Kab. Poso	83,443	90,867	97,389	105,381	283,386	286,352
	Kab. Donggala	n/a	n/a	n/a	n/a	621,336	626,900
	Kab. Buol Toli-Toli	n/a	n/a	n/a	n/a	215,414	219,499
	Kod. Palu	n/a	n/a	n/a	n/a	337,334	338,849
	Central Sulawesi	529,449	575,969	626,073	678,682	1,755,457	1,885,124
Southeast Sulawesi	Kab. Buton	103,897	121,253	135,585	138,873	323,795	337,643
	Kab. Muna	75,172	84,010	92,890	86,118	186,052	191,746
	Kab. Kendari	173,019	199,943	207,482	218,001	467,090	508,045
	Kod. Kendari	-	-	-	-	-	-
	Kab. Kolaka	113,195	120,329	151,478	168,386	312,241	336,436
	Southeast Sulawesi	465,094	525,636	587,435	611,378	1,289,181	1,373,870
North Sulawesi	Kab. Bolang Mongondow	121,912	130,406	142,295	154,945	381,891	410,628
	Kab. Gorontalo	124,051	147,504	160,952	175,260	431,962	464,467
	Kod. Gorontalo	49,037	52,698	57,502	62,614	154,325	165,938
	Kod. Manado	178,995	193,834	211,506	230,309	567,638	610,353
	Kab. Minahasa	276,915	299,653	326,972	356,040	877,527	943,561
	Kab. Sangihe Talaut	69,977	76,778	83,778	91,226	224,843	241,762
	Kod. Bitung	52,380	57,628	62,882	68,472	168,762	181,462
		North Sulawesi	873,267	958,501	1,045,887	1,138,866	2,806,948
South Sulawesi	Kab. Selayar	n/a	39,288	42,460	45,122	109,210	116,550
	Kab. Hulukumba	n/a	133,993	144,619	153,483	370,985	395,391
	Kab. Bantaeng	n/a	57,664	62,477	66,562	161,509	172,800
	Kab. Jeneponto	n/a	115,603	125,853	134,724	328,467	353,113
	Kab. Takalar	n/a	82,211	89,068	94,887	230,225	246,307
	Kab. Gowa	128,413	171,195	185,728	198,132	481,386	515,715
	Kab. Sinjai	70,558	77,202	83,492	88,786	215,036	229,643
	Kab. Bone	222,176	243,444	264,745	276,724	666,311	707,432
	Kab. Maros	92,327	95,629	103,618	110,400	267,895	286,644
	Kab. Pang. Kepulauan	n/a	98,060	106,201	113,097	274,309	293,363
	Kab. Barru	n/a	58,501	63,250	67,242	162,810	173,821
	Kab. Soppeng	n/a	89,770	97,118	103,312	250,301	267,401
	Kab. Wajo	n/a	142,613	157,149	170,275	420,198	457,229
	Kab. Sid. Rappang	n/a	92,658	100,054	106,236	256,906	273,939
	Kab. Pinrang	n/a	118,465	128,042	136,082	329,392	351,562
	Kab. Enrekang	n/a	58,671	63,672	67,945	165,130	176,960
	Kab. Luwu	n/a	272,734	300,169	324,849	800,679	870,188
	Kab. Tana Toraja	n/a	144,682	156,138	165,689	400,443	426,742
	Kab. Pole. Mamas	n/a	159,728	173,737	185,820	452,640	486,174
	Kab. Majene	n/a	44,392	49,600	54,493	136,354	150,443
Kab. Mamuju	49,186	70,924	82,160	93,587	242,792	277,734	
Kod. Ujung Pandang	n/a	376,719	429,792	482,157	1,231,915	1,387,876	
Kod. Pare-Pare	49,110	40,458	43,725	46,468	112,470	120,033	
	South Sulawesi	2,608,665	2,784,605	3,049,868	3,286,073	8,067,366	8,737,061

Notes: n/a = not available. Provincial GRDP in North Sulawesi from 1991 to 1994 is distributed by kabupaten according to 1990 shares. Provincial GRDP in South Sulawesi from 1990 to 1994 is distributed by kabupaten on a per capita basis according to 1990 and 1995 population figures.

Source: Dalam Angka by Provincial Bappeda, Central Sulawesi, Southeast Sulawesi, North Sulawesi, South Sulawesi

## 3.2 Future Socio-Economic Framework

### 3.2.1 Development Plans

The Second 25 Year Development Plan starting from the fiscal year 1993/1994 stresses the development of eastern Indonesia, including Sulawesi.

BAPPENAS (National Development Planning Agency) estimated provincial imports, exports, and domestic loading and unloading for PJP-II, which is the second 25 year development plan covering 1993 - 2018.<sup>1</sup> BAPPENAS's study linked Input-Output model estimates of provincial growth rates and outputs by economic sector with its National Spatial Strategy in order to analyze port facilities and transport infrastructure.

The study had two main growth alternatives. The first is a continuation of current trends with economic growth centered on Java, and the second addresses the issues of regional equity with a goal of a more equitable distribution of growth outside of Java. This second alternative is the official policy scenario for PJP-II.

Following the study of the growth rate of development in Indonesia and eastern Indonesia regions, the growth rate of Central and Southeast Sulawesi are programmed as shown in Table 3-2-1 (Base Case).

**Table 3-2-1 Planned Growth Rate of GRDP (Base Case)**

	GRDP Growth (% p.a.)			
	5 Year Development Plan Period			
	VII 1999-2003	VIII 2004-2008	IX 2009-2013	X 2014-2018
Indonesia	6.60%	7.10%	7.80%	8.70%
Eastern Indonesia	7.43%	7.99%	8.84%	9.94%
Central Sulawesi	7.31%	7.68%	7.92%	8.87%
Southeast Sulawesi	7.71%	8.06%	8.44%	9.50%

*Source: Base Data and Information by Bappenas and Modified by JICA Study Team*

For comparative purposes, the resulting growth rates from the above study were used to project the GRDP for lower and higher cases. Individual rate was developed for both Central and Southeast Sulawesi, while a single rate was used for the other two provinces. The lower case indicates that the continuation of past trends with economic

<sup>1</sup>BAPPENAS, "The Link Between PJP and Projections and SNPPTTR," March 1995 as quoted in Ministry of Communication's "Port Development Strategy Study for the Southern Sumatra and Western Java Region, August 1995."



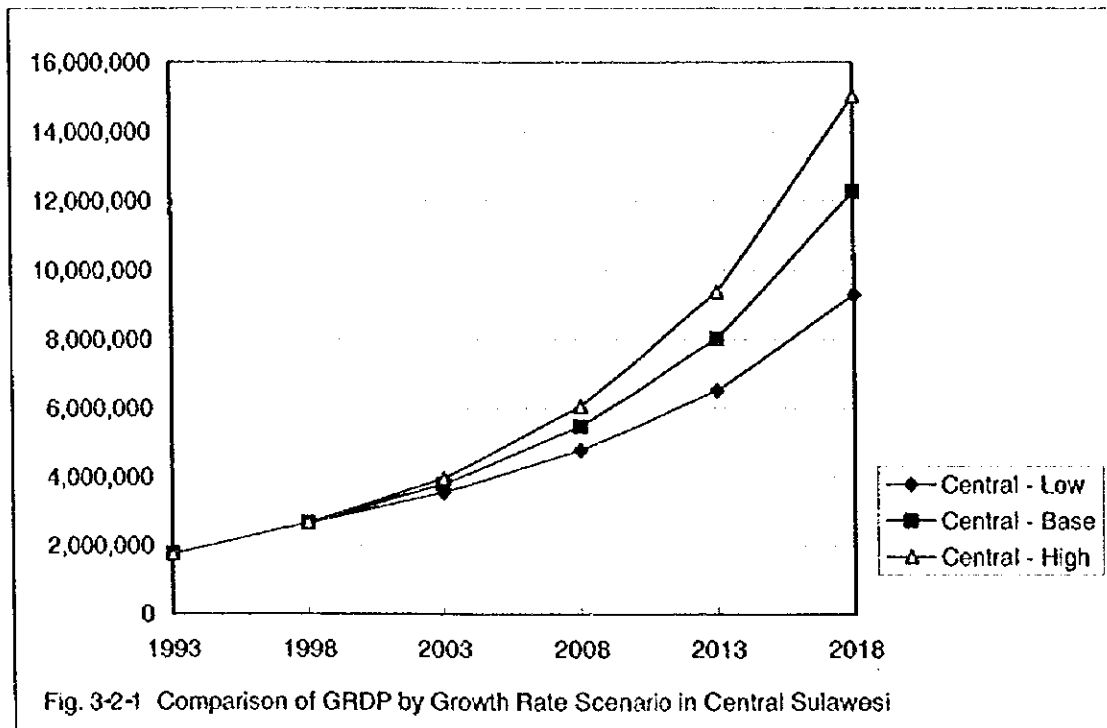
growth centered on Java translates into lower growth, while the higher case shows that more equitable distribution of growth than that of Base Case outside of Java results in a higher growth.

**Table 3-2-2 Provincial GRDP Growth Rates: Lower, Base, Higher**

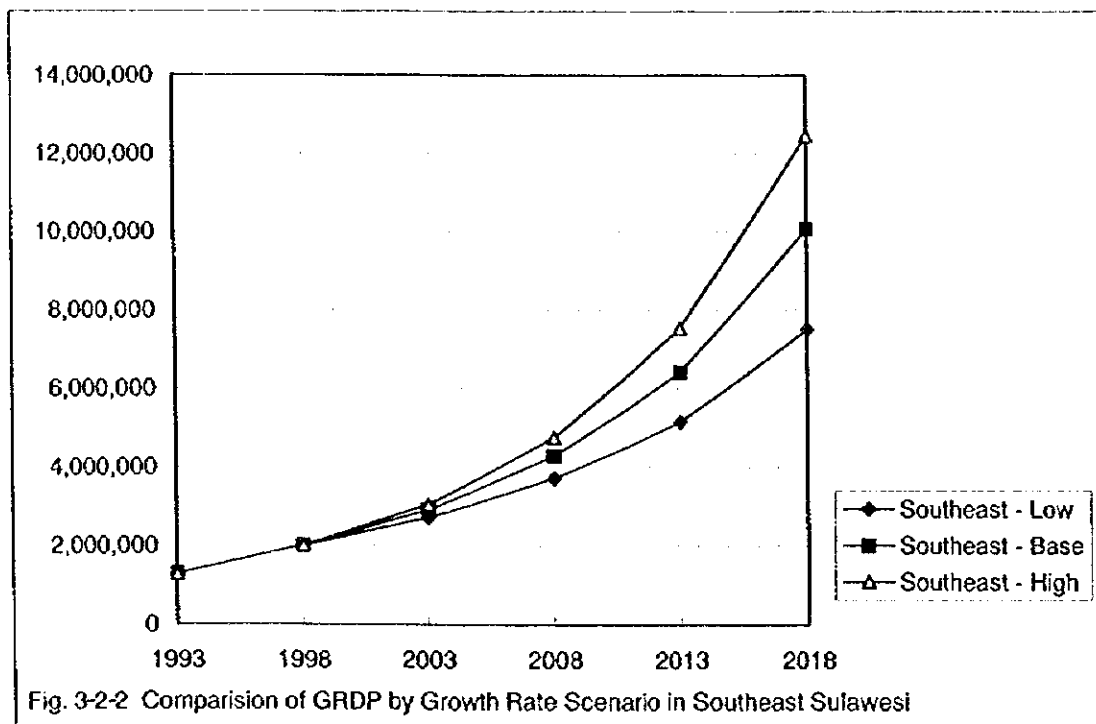
Province/Period	VII	VIII	IX	X
<b>Lower Growth</b>				
Central Sulawesi	5.89 %	6.17 %	6.39 %	7.36 %
Southeast Sulawesi	6.22 %	6.49 %	6.80 %	7.87 %
North Sulawesi	5.99 %	6.43 %	7.12 %	8.24 %
South Sulawesi	5.99 %	6.43 %	7.12 %	8.24 %
<b>Base Case</b>				
Central Sulawesi	7.31 %	7.68 %	7.92 %	8.87 %
Southeast Sulawesi	7.71 %	8.06 %	8.44 %	9.50 %
North Sulawesi	7.43 %	7.99 %	8.84 %	9.94 %
South Sulawesi	7.43 %	7.99 %	8.84 %	9.94 %
<b>Higher Case</b>				
Central Sulawesi	8.25 %	8.87 %	9.12 %	9.90 %
Southeast Sulawesi	8.71 %	9.32 %	9.72 %	10.59 %
North Sulawesi	8.39 %	9.24 %	10.18 %	11.09 %
South Sulawesi	8.39 %	9.24 %	10.18 %	11.09 %

*Source: Bappenas and Estimation by JICA Study Team*

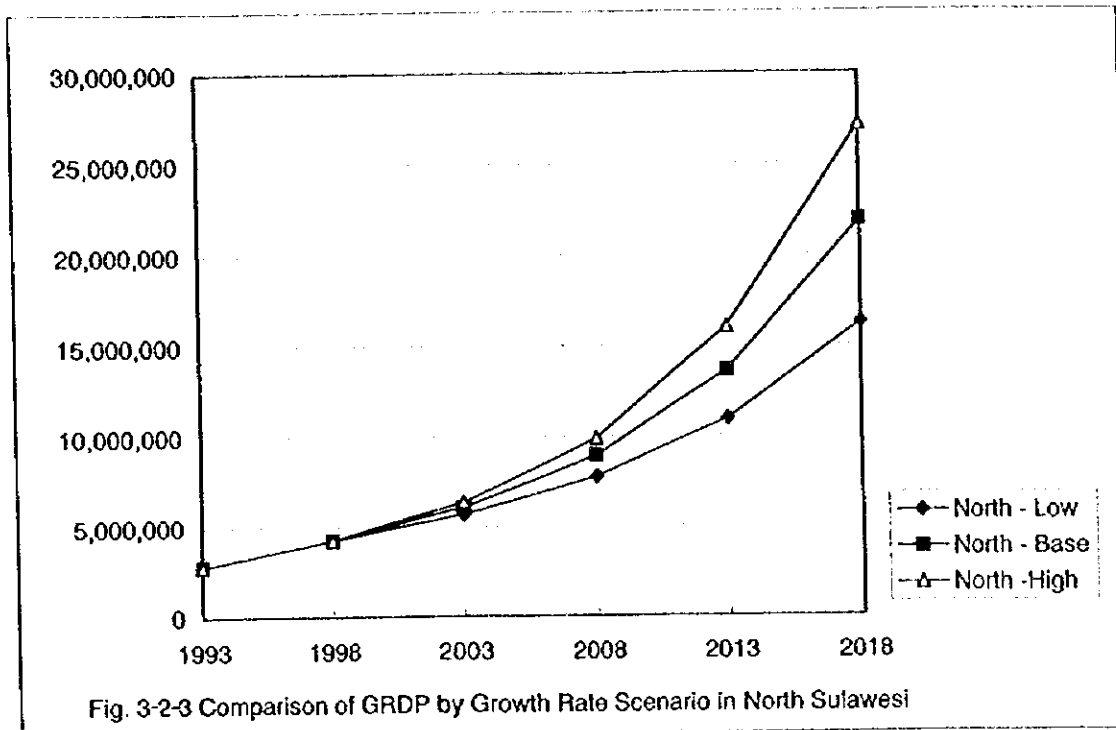
Graphical presentations of the GRDP levels in each province based on the above growth rates are presented in the following Figures 3-2-1 to 3-2-4.



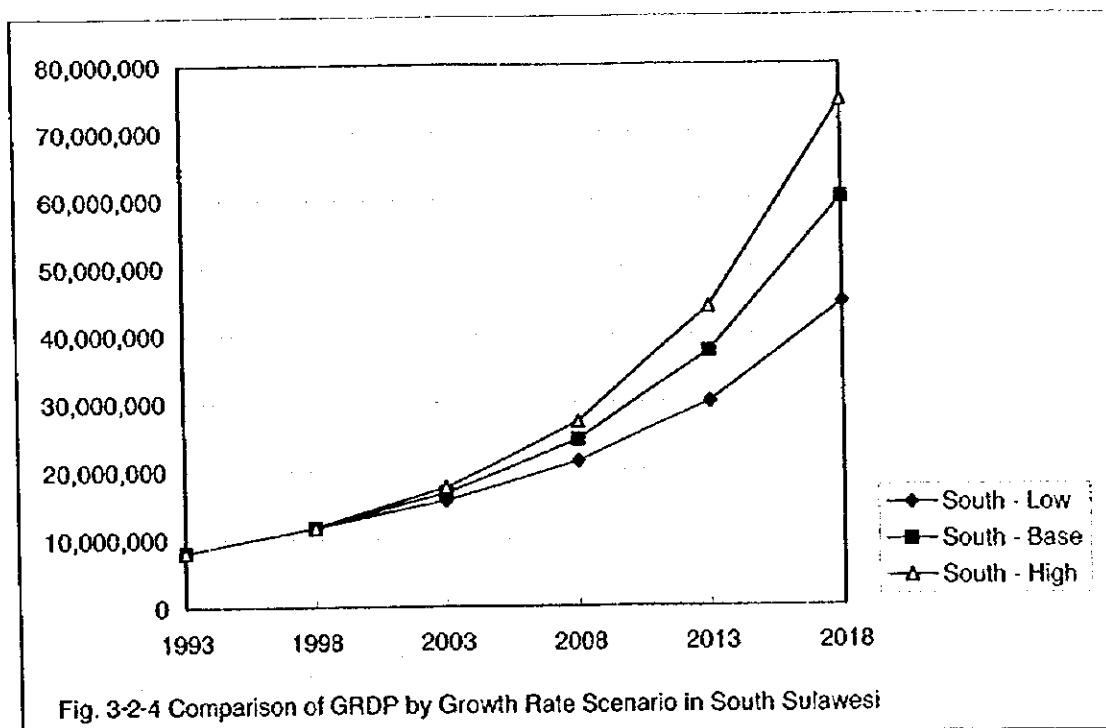
Source : JICA Study Team



Source : JICA Study Team



Source : JICA Study Team



Source : JICA Study Team

### 3.2.2 Development Strategy

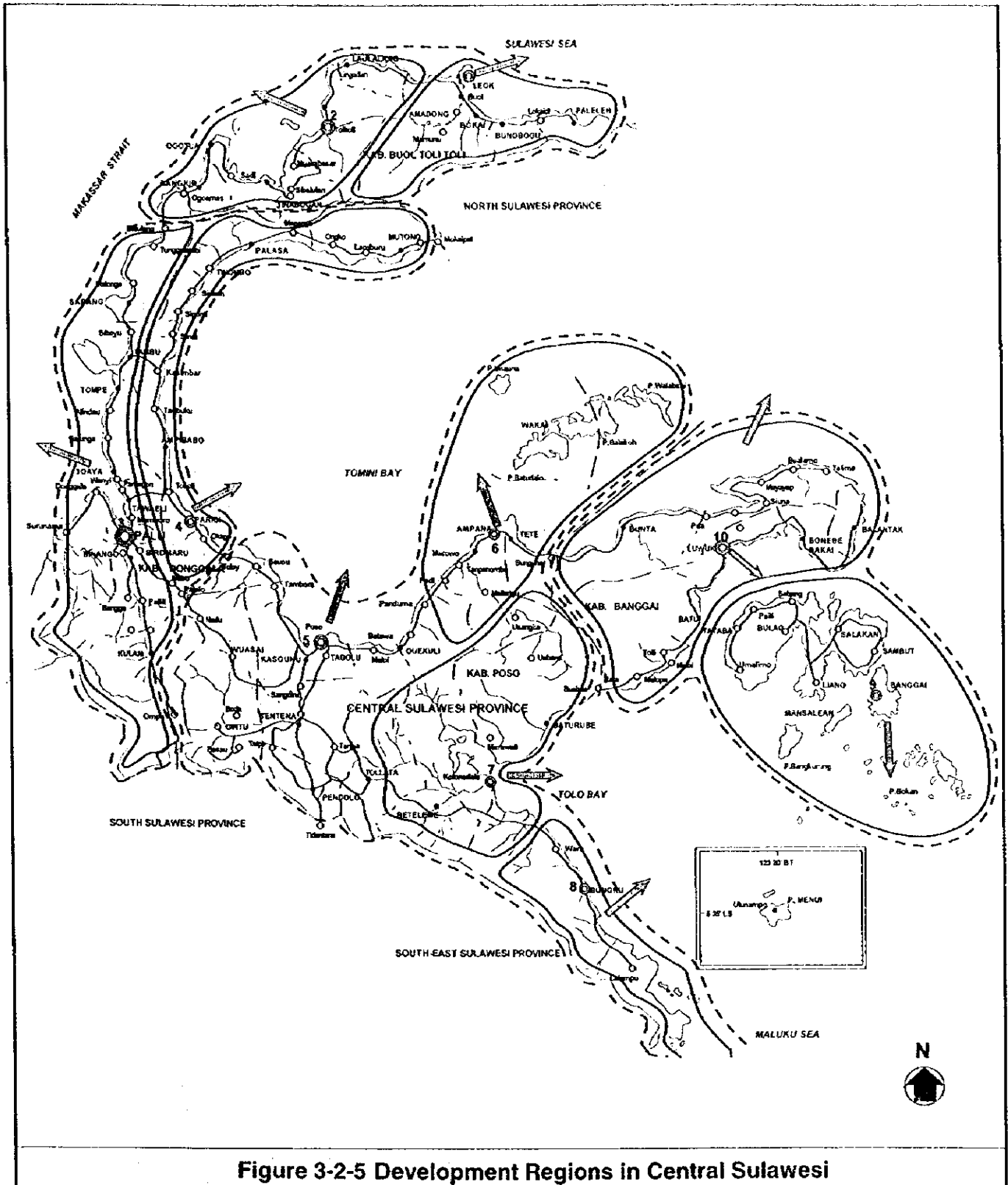
In the study area, the strategy for development is shown in the hierarchy of cities, development region (WP) classification, and development corridors as shown in the following Figures 3-2-5 to 3-2-10.

In both provinces, major industries and grade of development would be summarized in Table 3-2-3.

**Table 3-2-3 Major Industries for Development**

<b>CENTRAL SULAWESI</b>		
Development Region	Donggala	Industry, Agriculture, Mining
Developing Regions	- Poso - Luwuk/Banggai - Buol/Toli-Toli	Agriculture, Industry Agriculture Agriculture
<b>SOUTHEAST SULAWESI</b>		
Development Region	Kendari	Industry, Tourism
Developing Region	- Kolaka - Buton - Muna	Industry, Agriculture Agriculture Agriculture
Gates for Tourism Destination	Kendari, Kolaka, Baubau, Raha	

Source: Provincial Structure Plan by Provincial Bappeda, Central Sulawesi and Southeast Sulawesi



**Figure 3-2-5 Development Regions in Central Sulawesi**

Source: Provincial Structure Plan by Central Sulawesi Provincial Bappeda

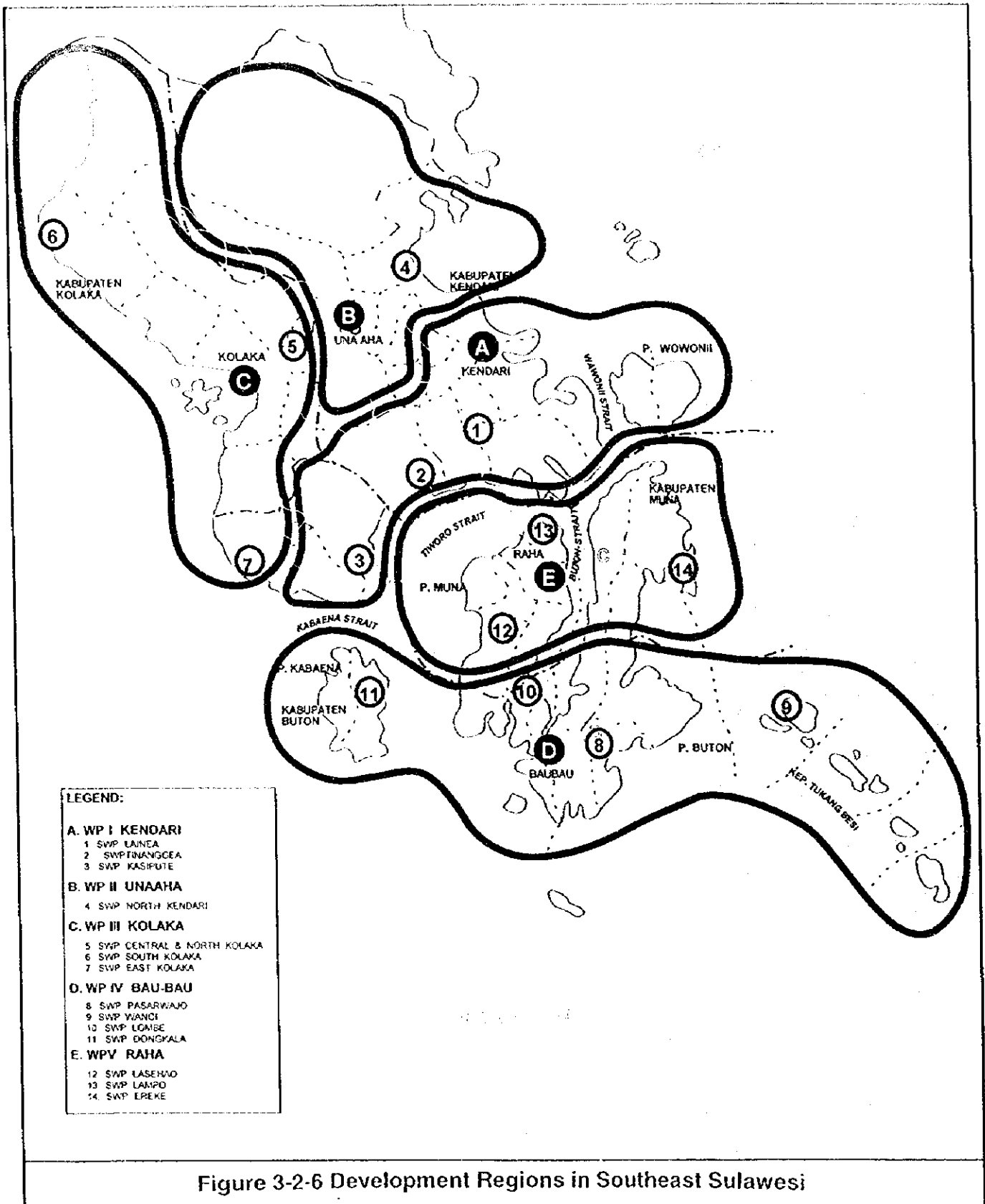
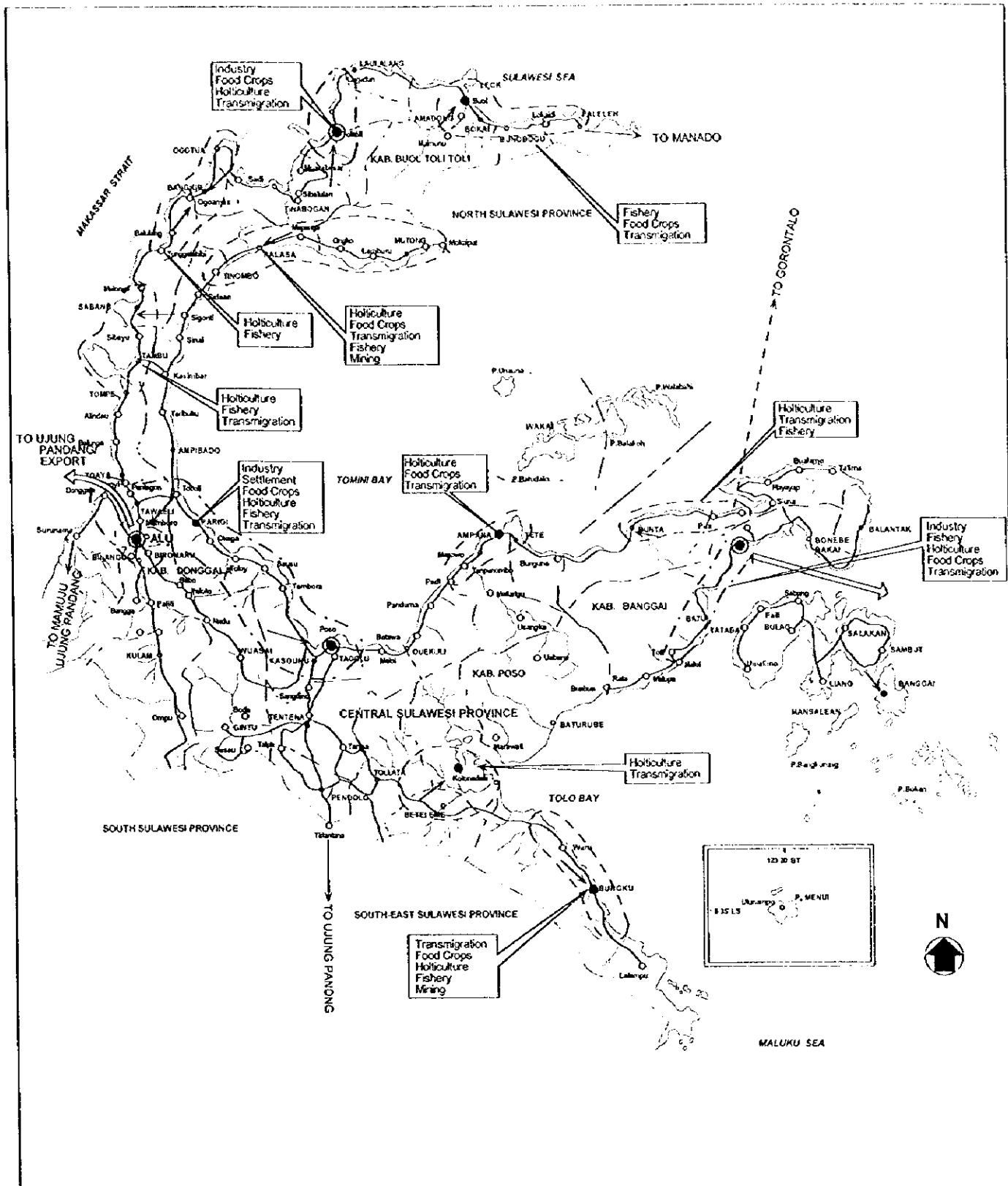


Figure 3-2-6 Development Regions in Southeast Sulawesi

Source: Provincial Structure Plan by Southeast Sulawesi Bappeda



**Figure 3-2-7 Major Industries Development Plans in Central Sulawesi**

Source: Strategic Plans by Dinas Perindustrian, Central Sulawesi Province

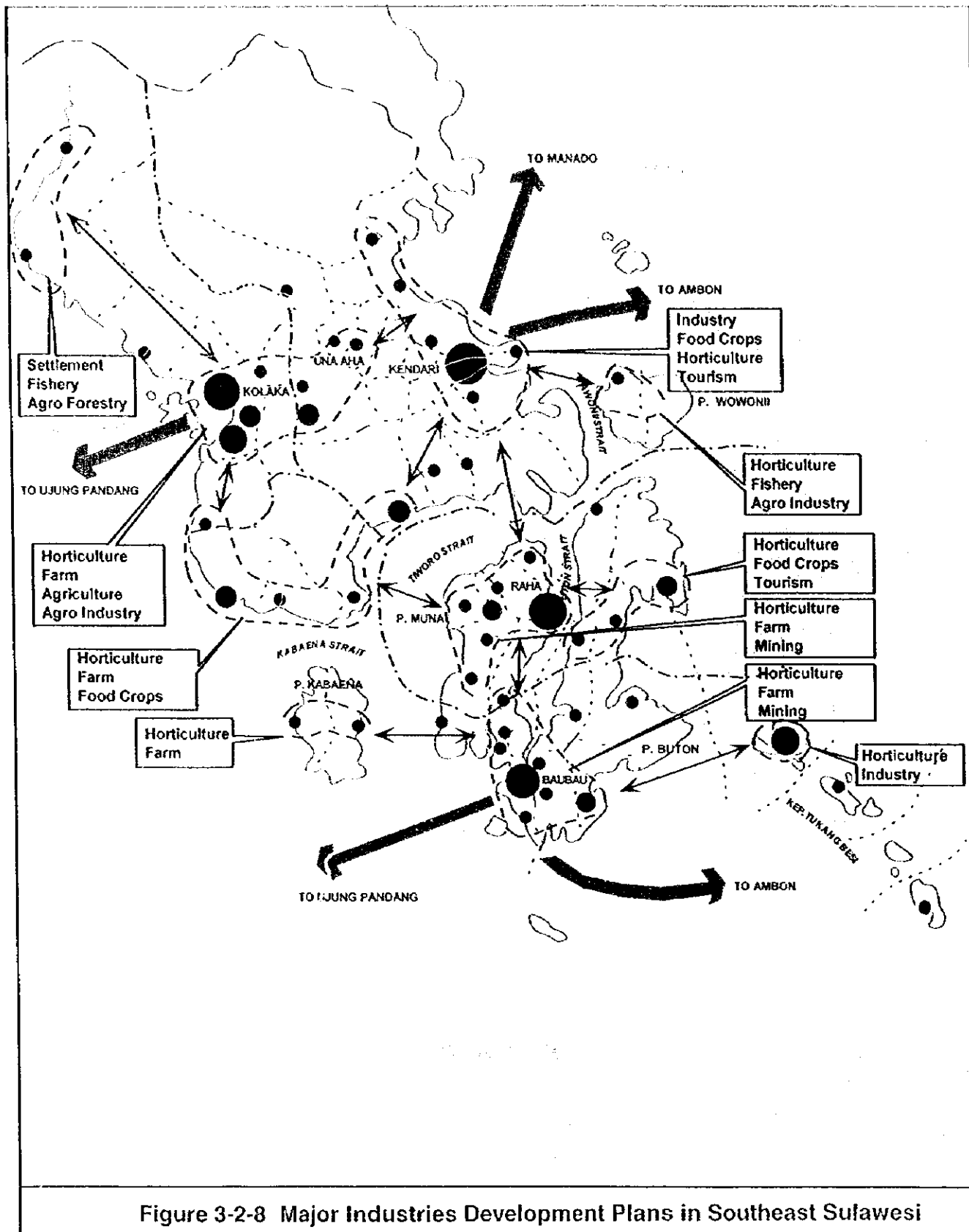


Figure 3-2-8 Major Industries Development Plans in Southeast Sulawesi

Source: Strategic Plans by Dinas Perindustrian, Southeast Sulawesi Province



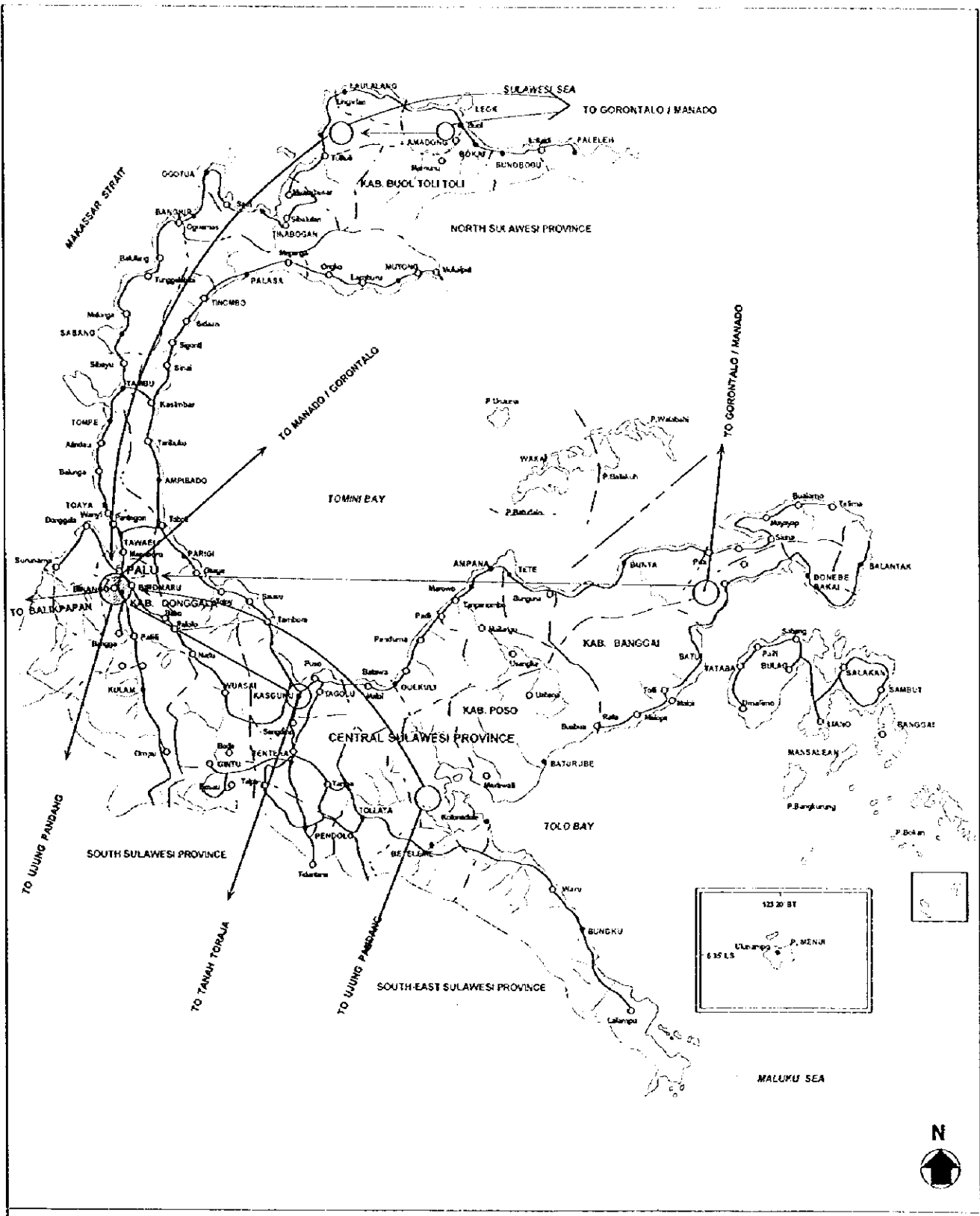
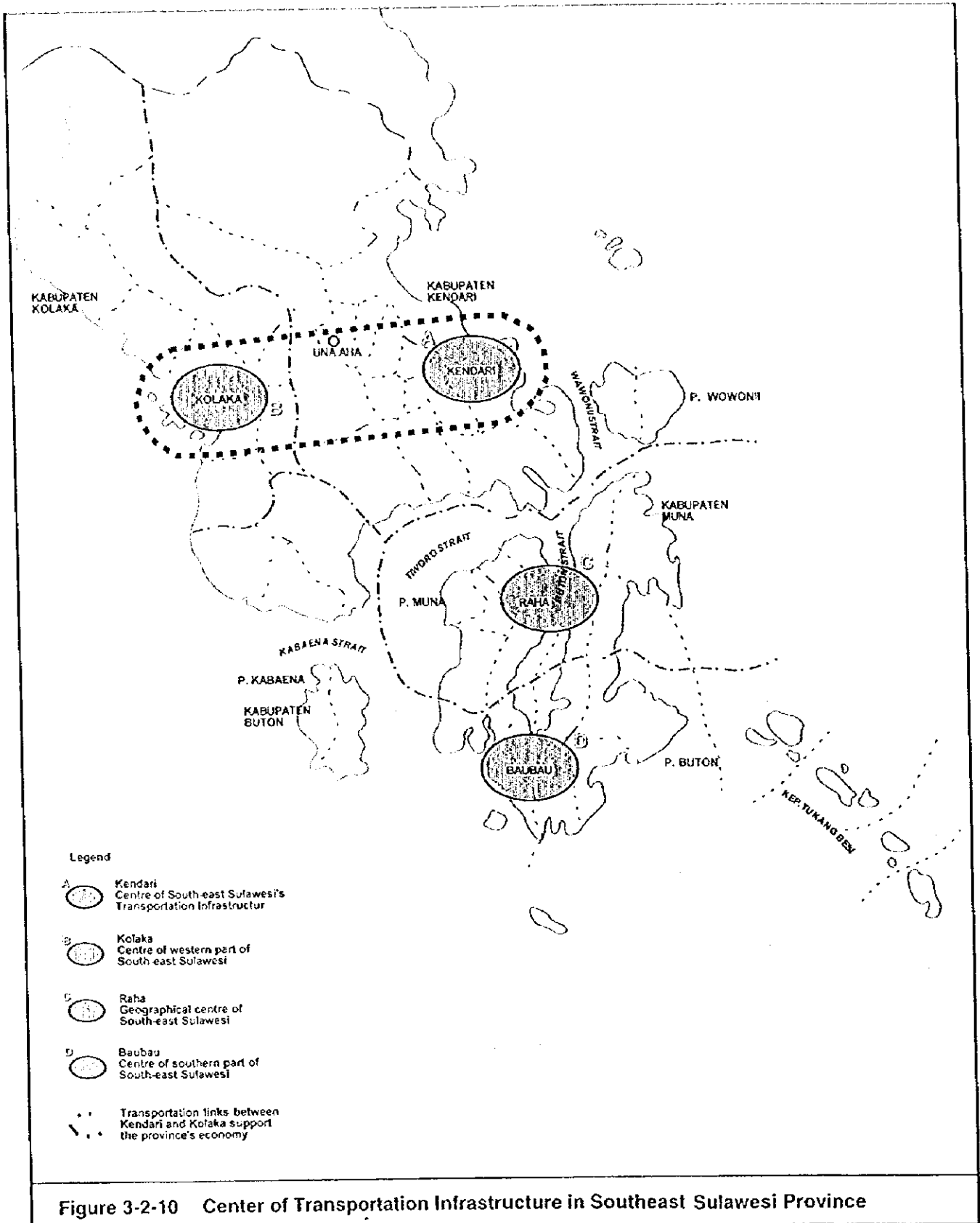


Figure 3-2-9 Air Routes in Central Sulawesi

Source: Regional Office in Central Sulawesi, Ministry of Communication



**Figure 3-2-10 Center of Transportation Infrastructure in Southeast Sulawesi Province**

Source: Regional Office of Southeast Sulawesi, Ministry of Communications

### 3.2.3 Population Growth and Distribution

#### (1) Process

The provincial population projection for the years 1990 to 2020 made by the Demographic Institute of the University of Indonesia<sup>2</sup> is employed as the basic population framework. This projection utilized the standard five-year period age-component method, and an assumption on migration was added. The provincial projections for the years 1995 to 2005 were adjusted by a more recent projection by the Central Bureau of Statistics<sup>3</sup>. In addition to the above, another recent projection by the Central Bureau of Statistics<sup>4</sup> by kabupaten and kotamadya for the years 1990 to 2000 was employed.

The projected population of each province was utilized as an independent control total on kabupaten population projection. Kabupaten population projection utilized the past population growth trend-base method, adjusted to each provincial control total. Corresponding to the requirements of the traffic forecasts, the kabupatens of Central Sulawesi and Southeast Sulawesi were projected at the kecamatan level. For these kabupatens, the population by kecamatan were also projected utilizing the past population growth trend-base method, adjusting to each kabupaten control total.

#### (2) Future Population

The annual growth rate of the republic's population, which recorded 1.98% during the last decade (1980-1990), will gradually decrease from 1.73% in 1990-1995 to 1.10% in 2015-2020. According to the institute's study, *"The second demographic revolution is currently underway in Indonesia. The first is the fast change in mortality occurring since about 35 years ago. The current revolution is on the rapid decline of fertility rate. Indonesia will end its demographic transition (indicated with NRR -- net reproduction rate -- equal to one) in 2000-2005. After 2005, Indonesia demographic condition (Fertility and mortality) will be close to those observed in developed countries such as Australia in 1990"*.

The results of the population projection at the kecamatan level for Central Sulawesi and Southeast Sulawesi, and at the kabupaten level for North Sulawesi and South Sulawesi are presented in the following (Tables 3-2-4, 3-2-5 and 3-2-6, and Figures 3-2-11, 3-2-12, 3-2-13 and 3-2-14).

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<sup>2</sup>Population Projection of Indonesian Provinces 1990-2020, The Demographic Institute, University of Indonesia, 1992.

<sup>3</sup>Proyeksi Penduduk Indonesia Per Propinsi 1995-2005, Biro Pusat Statistik, 1997.

<sup>4</sup>Proyeksi Penduduk Indonesia Per Kabupaten/Kotamadya 1990-2000, Biro Pusat Statistik, 1994.

Table 3-2-4 (1) Urban and Rural Population Projection by Kecamatan in Central Sulawesi, 1998 - 2018

Province	1998			2003			2008			2013			2018		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
	Central Sulawesi	0	19,481	19,481	0	20,229	20,229	0	20,927	20,927	0	21,559	21,559	0	22,130
Kec. Lobang Kurung	0	76,402	76,402	0	83,729	83,729	0	90,906	90,906	0	97,881	97,881	0	104,613	104,613
Kec. Batui	0	15,529	15,529	0	16,039	16,039	0	16,496	16,496	0	16,923	16,923	0	17,266	17,266
Kec. Toikum	0	17,682	17,682	0	18,437	18,437	0	19,128	19,128	0	19,756	19,756	0	20,328	20,328
Kec. Tinanglung	0	14,685	14,685	0	15,222	15,222	0	15,708	15,708	0	16,145	16,145	0	16,537	16,537
Kec. Liang	0	24,394	24,394	0	24,837	24,837	0	24,836	24,836	0	24,987	24,987	0	25,100	25,100
Kec. Bulagi	0	16,302	16,302	0	16,650	16,650	0	16,951	16,951	0	17,209	17,209	0	17,430	17,430
Kec. Buiko	3,010	20,246	23,256	3,985	20,725	24,710	5,265	20,810	26,075	6,957	20,391	27,343	9,192	19,332	28,524
Kec. Banggai	6,000	38,278	44,278	7,945	43,256	51,201	10,498	47,888	58,385	13,872	51,873	65,744	18,329	54,867	73,196
Kec. Buntone	0	10,455	10,455	0	10,904	10,904	0	11,314	11,314	0	11,687	11,687	0	12,027	12,027
Kec. Kintom	43,647	14,692	58,340	57,800	6,089	63,889	70,615	0	70,615	78,764	0	78,764	85,194	0	85,194
Kec. Luwuk	614	20,507	21,121	813	21,398	22,211	1,074	22,028	23,102	1,420	22,586	23,976	1,876	22,900	24,776
Kec. Lamalala	0	13,295	13,295	0	13,649	13,649	0	13,961	13,961	0	14,234	14,234	0	14,473	14,473
Kec. Balantak	3,331	33,562	36,893	4,411	34,455	38,866	5,828	34,870	40,698	7,700	34,687	42,387	10,174	33,762	43,937
Kec. Payimana	56,602	335,480	392,082	74,955	345,331	420,286	93,281	355,819	449,099	108,712	369,889	478,581	124,765	380,766	505,530
Kab. Luwuk/Banggai	0	11,419	11,419	0	11,795	11,795	0	11,998	11,998	0	12,214	12,214	0	12,391	12,391
Kec. Menui Kepulauan	0	20,548	20,548	0	21,136	21,136	0	21,629	21,629	0	22,037	22,037	0	22,373	22,373
Kec. Bungku Selatan	847	43,016	43,863	1,104	49,225	50,329	1,458	55,457	56,915	1,927	61,612	63,539	2,546	67,583	70,129
Kec. Bungku Tengah	0	17,090	17,090	0	20,242	20,242	0	23,565	23,565	0	27,017	27,017	0	30,554	30,554
Kec. Lembo	0	11,304	11,304	0	11,476	11,476	0	11,604	11,604	0	11,694	11,694	0	11,755	11,755
Kec. Mon Atas	0	22,708	22,708	0	26,094	26,094	0	29,549	29,549	0	33,029	33,029	0	36,496	36,496
Kec. Pamona Selatan	0	28,733	28,733	0	30,037	30,037	0	31,194	31,194	0	32,215	32,215	0	33,112	33,112
Kec. Pamona Utara	657	7,082	7,739	857	7,036	7,893	1,132	6,882	8,014	1,496	6,610	8,106	1,978	6,195	8,173
Kec. Lore Selatan	0	12,910	12,910	0	13,865	13,865	0	14,758	14,758	0	15,588	15,588	0	16,355	16,355
Kec. Lore Utara	0	32,700	32,700	0	37,106	37,106	0	41,535	41,535	0	45,939	45,939	0	50,274	50,274
Kec. Poso Pesisir	28,764	11,199	39,964	37,507	4,658	42,165	45,295	0	45,295	49,316	0	49,316	51,948	0	51,948
Kec. Poso Kota	0	14,994	14,994	0	15,840	15,840	0	16,608	16,608	0	17,303	17,303	0	17,927	17,927
Kec. Lays	0	19,785	19,785	0	20,393	20,393	0	20,907	20,907	0	21,338	21,338	0	21,697	21,697
Kec. Tojo	4,564	21,436	26,000	5,951	20,944	26,895	7,864	19,798	27,662	10,391	17,806	28,297	13,729	15,068	28,797
Kec. Petasi	0	17,695	17,695	0	20,697	20,697	0	23,820	23,820	0	27,023	27,023	0	30,269	30,269
Kec. Bungku Utara	0	9,138	9,138	0	10,288	10,288	0	11,433	11,433	0	12,562	12,562	0	13,664	13,664
Kec. Ulu Bongka	4,875	20,870	25,745	6,357	19,147	25,503	8,399	16,807	25,208	11,098	13,746	24,844	14,663	9,716	24,380
Kec. Ampana Ter	0	16,918	16,918	0	16,547	16,547	0	16,171	16,171	0	15,797	15,797	0	15,424	15,424
Kec. Ampana Kota	0	11,971	11,971	0	12,266	12,266	0	12,507	12,507	0	12,701	12,701	0	12,856	12,856
Kec. Una-Una	39,707	366,563	406,270	51,776	385,106	436,882	64,148	403,859	468,008	74,228	425,166	499,394	84,864	443,680	528,544
Kec. Walea Kepulauan	0	29,188	29,188	0	30,166	30,166	0	31,042	31,042	0	31,824	31,824	0	32,520	32,520
Kab. Poso	0	49,801	49,801	0	51,763	51,763	0	53,543	53,543	0	55,152	55,152	0	56,602	56,602
Kec. Kulawi	0	81,497	81,497	0	90,677	90,677	0	99,823	99,823	0	108,847	108,847	0	117,675	117,675
Kec. Dolo	2,212	85,791	88,003	3,071	93,954	97,025	4,058	101,645	105,902	5,362	109,214	114,575	7,085	115,697	122,982
Kec. Sigibromaru	0	33,920	33,920	0	36,297	36,297	0	38,557	38,557	0	40,699	40,699	0	42,701	42,701
Kec. Paligi	13,977	37,228	51,205	19,408	39,622	59,030	26,644	32,860	58,504	33,863	37,823	61,706	44,771	19,701	64,472
Kec. Marewola	3,479	20,293	23,772	4,831	21,301	26,132	6,383	22,034	28,417	8,424	22,200	30,634	11,144	21,620	32,764
Kec. Banawa	0	38,710	38,710	0	40,973	40,973	0	43,092	43,092	0	45,067	45,067	0	46,898	46,898
Kec. Tawaeli	0	29,137	29,137	0	30,461	30,461	0	31,678	31,678	0	32,789	32,789	0	33,801	33,801
Kec. Ampibabo	0	16,951	16,951	0	17,865	17,865	0	18,715	18,715	0	19,502	19,502	0	20,228	20,228
Kec. Sintue	0	24,096	24,096	0	25,326	25,326	0	26,465	26,465	0	27,516	27,516	0	28,481	28,481
Kec. Sirena	0	51,521	51,521	0	55,240	55,240	0	58,765	58,765	0	62,143	62,143	0	65,306	65,306
Kec. Balaesang	4,076	34,701	42,778	5,659	39,377	45,036	7,477	39,615	47,093	9,880	39,102	46,982	13,065	37,650	50,705
Kec. Dampelas Sojoi	0	52,982	52,982	0	59,393	59,393	0	65,632	65,632	0	72,233	72,233	0	78,541	78,541
Kec. Tombo	0	71,950	71,950	0	85,756	85,756	0	100,536	100,536	0	116,124	116,124	0	132,337	132,337
Kec. Toroni	0	100,536	100,536	0	100,536	100,536	0	100,536	100,536	0	100,536	100,536	0	100,536	100,536
Kec. Meurong	0	71,950	71,950	0	85,756	85,756	0	100,536	100,536	0	116,124	116,124	0	132,337	132,337

Table 3-2-4 (2) Urban and Rural Population Projection by Kecamatan in Central Sulawesi, 1998 - 2018

Province	1998			2003			2008			2013			2018		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Kab. Donggala	23,743	661,767	685,510	32,968	714,171	747,139	43,561	764,423	807,984	57,559	810,229	867,788	76,054	849,958	926,012
Kec. Dampal Selatan	0	20,991	20,991	0	22,326	22,326	0	23,590	23,590	0	24,780	24,780	0	25,897	25,897
Kec. Dampal Utara	0	13,513	13,513	0	13,775	13,775	0	14,000	14,000	0	14,195	14,195	0	14,361	14,361
Kec. Dondo	0	27,319	27,319	0	29,532	29,532	0	31,671	31,671	0	33,725	33,725	0	35,686	35,686
Kec. Boalele	35,801	36,240	72,040	45,637	36,294	81,931	60,327	31,790	92,117	79,710	22,307	102,017	105,323	2,015	107,338
Kec. Galang	0	29,262	29,262	0	31,781	31,781	0	34,229	34,229	0	36,591	36,591	0	38,857	38,857
Kec. Utara Toli-Toli	0	20,306	20,306	0	21,722	21,722	0	23,072	23,072	0	24,353	24,353	0	25,562	25,562
Kec. Biau	0	24,674	24,674	0	26,009	26,009	0	27,255	27,255	0	28,417	28,417	0	29,494	29,494
Kec. Momunu	0	19,190	19,190	0	20,314	20,314	0	21,371	21,371	0	22,361	22,361	0	23,284	23,284
Kec. Bokat	0	17,731	17,731	0	18,268	18,268	0	18,748	18,748	0	19,178	19,178	0	19,561	19,561
Kec. Bunobogu	0	15,437	15,437	0	15,785	15,785	0	16,089	16,089	0	16,355	16,355	0	16,586	16,586
Kec. Paleleh	0	13,643	13,643	0	14,648	14,648	0	15,611	15,611	0	16,528	16,528	0	17,398	17,398
Kab. Buol Toli-Toli	35,801	238,306	274,107	45,637	250,452	296,089	60,327	257,428	317,754	79,710	258,790	338,500	105,323	248,703	354,026
Kec. Palu Selatan	75,449	3,514	78,963	85,206	0	85,206	93,433	0	93,433	100,402	0	100,402	107,222	0	107,222
Kec. Palu Barat	67,332	3,908	71,240	76,577	0	76,577	84,317	0	84,317	90,607	0	90,607	96,761	0	96,761
Kec. Palu Timur	54,429	486	54,915	59,860	0	59,860	64,765	0	64,765	69,596	0	69,596	74,323	0	74,323
Kec. Utara	2,541	24,805	27,346	5,028	24,753	29,781	6,644	25,671	32,211	8,779	25,818	34,586	11,600	25,319	36,919
Kod. Palu	199,811	32,714	232,524	226,671	24,753	251,424	249,158	25,567	274,725	269,394	25,818	295,201	289,907	25,319	315,226
Sulawesi Tenggara	355,664	1,634,830	1,990,494	432,027	1,719,813	2,151,840	510,478	1,807,095	2,317,571	589,593	1,889,871	2,479,464	690,913	1,948,425	2,629,338

Source: Dalam Angka Kabupaten, Central Sulawesi and Estimation by JICA Study Team



Table 3-2-5 (2) Urban and Rural Population Projection by Kecamatan in Southeast Sulawesi, 1993 - 2018

Province	1993 Population			1998 Population			2003 Population			2008 Population			2013 Population			2018 Population		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Kec. Poasia	0	21,243	21,243	0	23,272	23,272	0	24,990	24,990	0	26,379	26,379	0	27,487	27,487	0	28,363	28,363
Kec. Kendan	48,774	5,161	53,935	54,236	0	54,236	59,146	0	59,146	61,707	0	61,707	63,644	0	63,644	65,089	0	65,089
Kec. Kenda	97,954	49,965	147,919	122,700	40,966	163,667	157,754	38,120	195,873	190,207	32,936	223,143	223,383	27,487	250,870	251,481	28,363	279,844
Kec. Wulurangga	0	26,717	26,717	0	32,634	32,634	0	40,422	40,422	0	48,438	48,438	0	56,539	56,539	0	64,492	64,492
Kec. Pomalaa	15,735	5,390	21,125	19,306	2,254	21,561	22,748	0	22,748	24,148	0	24,148	24,800	0	24,800	25,301	0	25,301
Kec. Wundulako	0	19,253	19,253	0	19,054	19,054	0	18,735	18,735	0	18,354	18,354	0	17,948	17,948	0	17,545	17,545
Kec. Langoogi	0	27,355	27,355	0	34,019	34,019	0	42,975	42,975	0	52,416	52,416	0	62,989	62,989	0	71,769	71,769
Kec. Trarua	2,823	10,866	13,689	3,915	11,909	15,824	5,616	13,043	18,659	7,187	13,966	21,153	9,368	14,237	23,605	12,215	13,665	25,880
Kec. Kolaka	10,313	24,746	35,059	14,304	24,201	38,505	20,152	22,870	43,022	26,257	20,598	46,816	34,225	15,824	50,049	44,827	7,653	52,480
Kec. Woco	0	26,870	26,870	0	31,244	31,244	0	36,666	36,666	0	41,925	41,925	0	46,930	46,930	0	51,624	51,624
Kec. Monene	0	12,105	12,105	0	14,306	14,306	0	17,091	17,091	0	19,851	19,851	0	22,527	22,527	0	25,078	25,078
Kec. Lasusua	0	34,681	34,681	0	36,039	36,039	0	41,918	41,918	0	45,339	45,339	0	48,344	48,344	0	50,385	50,385
Kec. Pakue	0	37,408	37,408	0	45,907	45,907	0	56,370	56,370	0	67,470	67,470	0	78,801	78,801	0	89,538	89,538
Kab. Kolaka	28,889	255,990	284,259	37,525	253,287	290,812	48,415	290,100	338,515	57,592	328,337	385,930	68,363	363,040	431,433	82,144	392,329	474,473
Sulawesi Tenggara	245,746	1,651,831	1,410,929	300,211	2,337,052	1,537,263	367,101	1,363,829	1,720,930	429,282	1,470,746	1,900,028	494,527	1,596,623	2,061,161	559,241	1,652,034	2,211,976

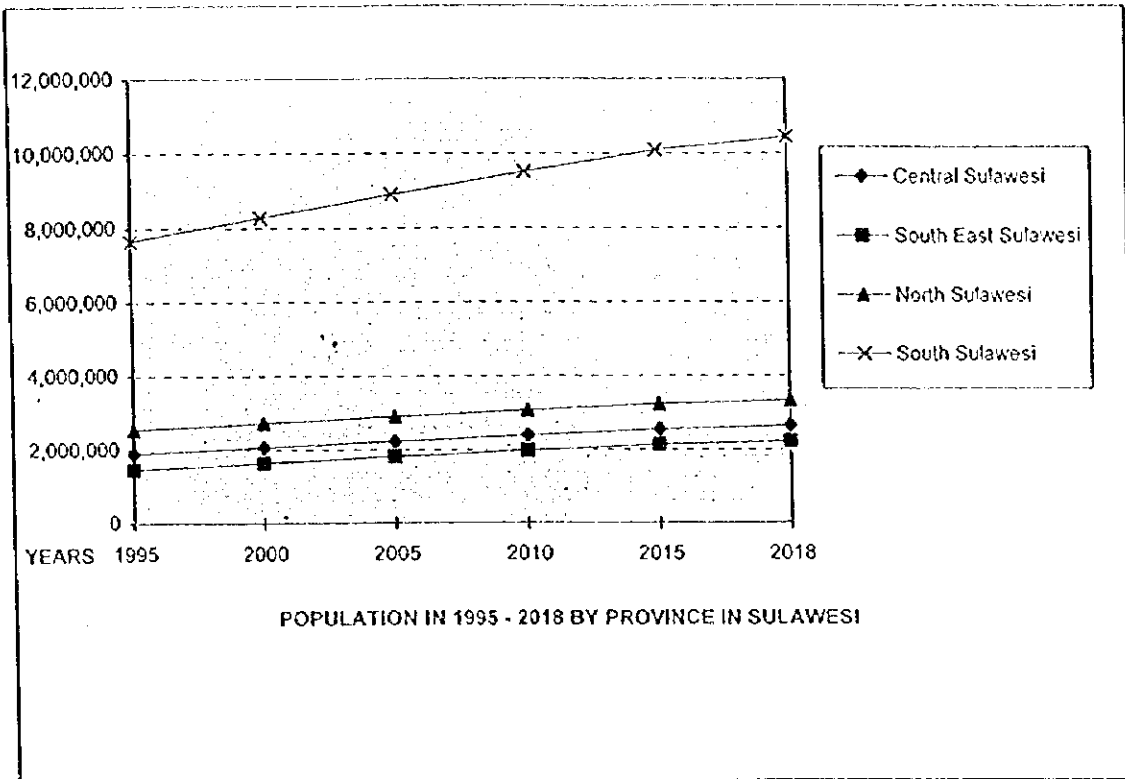
Source: Dalam Angka Kabupaten Southeast Sulawesi and Estimasi by JICA Study Team

Table 3-2-6 Population Projection by Kabupaten in North and South Sulawesi, 1998 - 2018

Province	Kabupaten	Population						
		1998	2003	2008	2013	2018		
North Sulawesi	Kab. Bolang Mongondow	418,831	444,108	475,290	505,334	534,115		
	Kab. Gorontalo	649,560	681,778	722,914	762,159	799,414		
	Kod. Gorontalo	133,462	141,132	150,668	159,832	168,590		
	Kod. Manado	400,921	441,574	488,772	536,066	582,838		
	Kab. Minahasa	714,025	732,162	760,048	786,006	810,101		
	Kab. Sangihe Talaut	268,987	277,326	289,517	300,547	311,030		
	Kod. Bitung	107,615	110,390	114,633	118,585	122,254		
	<b>North Sulawesi</b>	<b>2,649,379</b>	<b>2,828,448</b>	<b>3,001,802</b>	<b>3,168,671</b>	<b>3,328,465</b>		
	South Sulawesi	Kab. Selayar	101,054	101,740	102,006	101,919	101,541	
		Kab. Bulukumba	349,521	363,601	375,657	385,803	394,185	
Kab. Bantaeng		158,138	172,735	186,631	199,705	211,873		
Kab. Jeneponto		321,997	347,090	370,484	392,040	411,694		
Kab. Takalar		222,930	239,301	254,452	268,310	280,854		
Kab. Gowa		469,265	506,899	542,108	574,665	604,454		
Kab. Sinjai		204,933	215,729	225,317	233,718	240,987		
Kab. Bone		607,372	606,988	604,468	600,214	594,594		
Kab. Maros		259,430	278,416	295,982	312,042	326,572		
Kab. Pang. Kepulauan		260,350	271,053	280,245	288,006	294,444		
Kab. Barru		152,405	156,082	158,960	161,120	162,647		
Kab. Soppeng		231,791	232,895	233,075	232,483	231,263		
Kab. Wajo		403,665	405,538	405,806	404,734	402,571		
Kab. Sid. Rappang		241,765	250,674	258,201	264,438	269,495		
Kab. Pinrang		310,239	321,136	330,275	337,780	343,798		
Kab. Enrekang		157,311	163,687	169,151	173,753	177,561		
Kab. Luwu		834,311	957,035	1,081,554	1,206,047	1,328,895		
Kab. Tana Toraja		375,031	386,608	396,113	403,715	409,606		
Kab. Pole. Mamas	432,338	448,482	462,152	473,505	482,738			
Kab. Majene	136,437	139,923	142,685	144,792	146,321			
Kab. Mamuju	305,585	402,059	515,431	645,389	791,050			
Kod. Ujung Pandang	1,368,647	1,550,670	1,732,631	1,912,022	2,086,705			
Kod. Pare-Pare	107,988	115,263	121,926	127,955	133,352			
<b>South Sulawesi</b>	<b>8,016,456</b>	<b>8,637,488</b>	<b>9,249,080</b>	<b>9,847,779</b>	<b>10,430,641</b>			

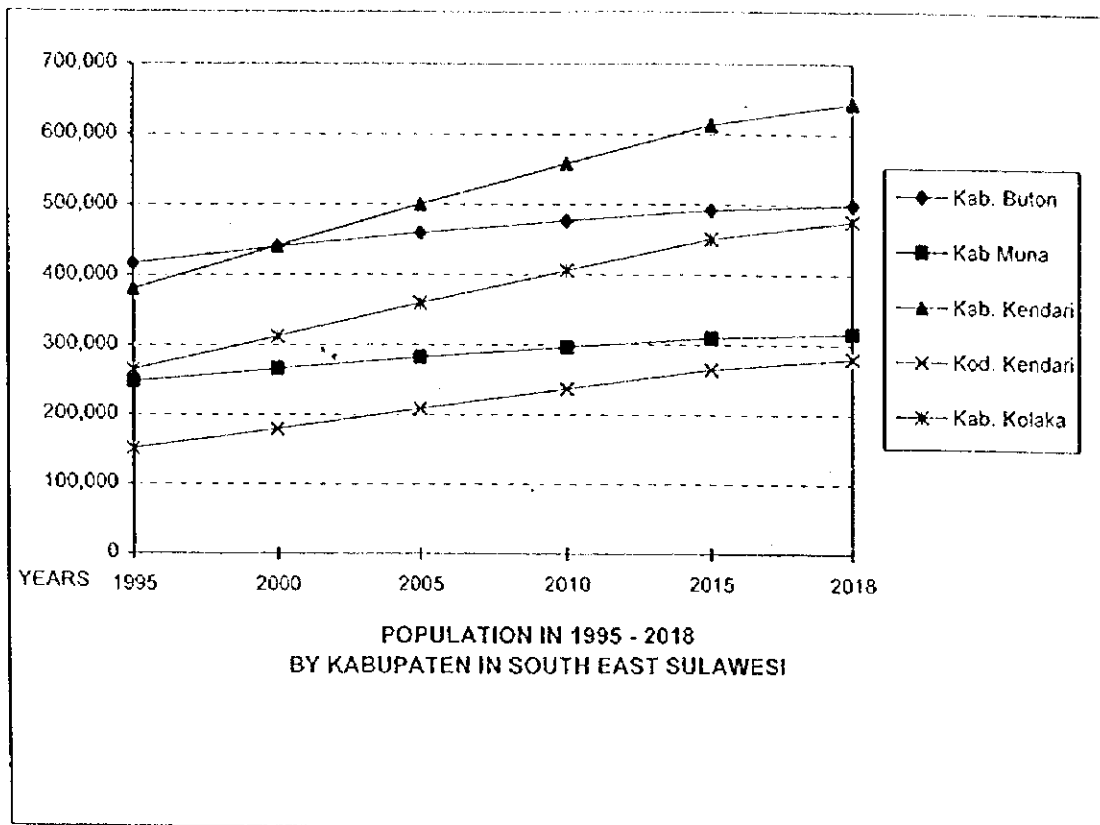
Source: Dalam Angka Propinsi and Estimation by JICA Study Team





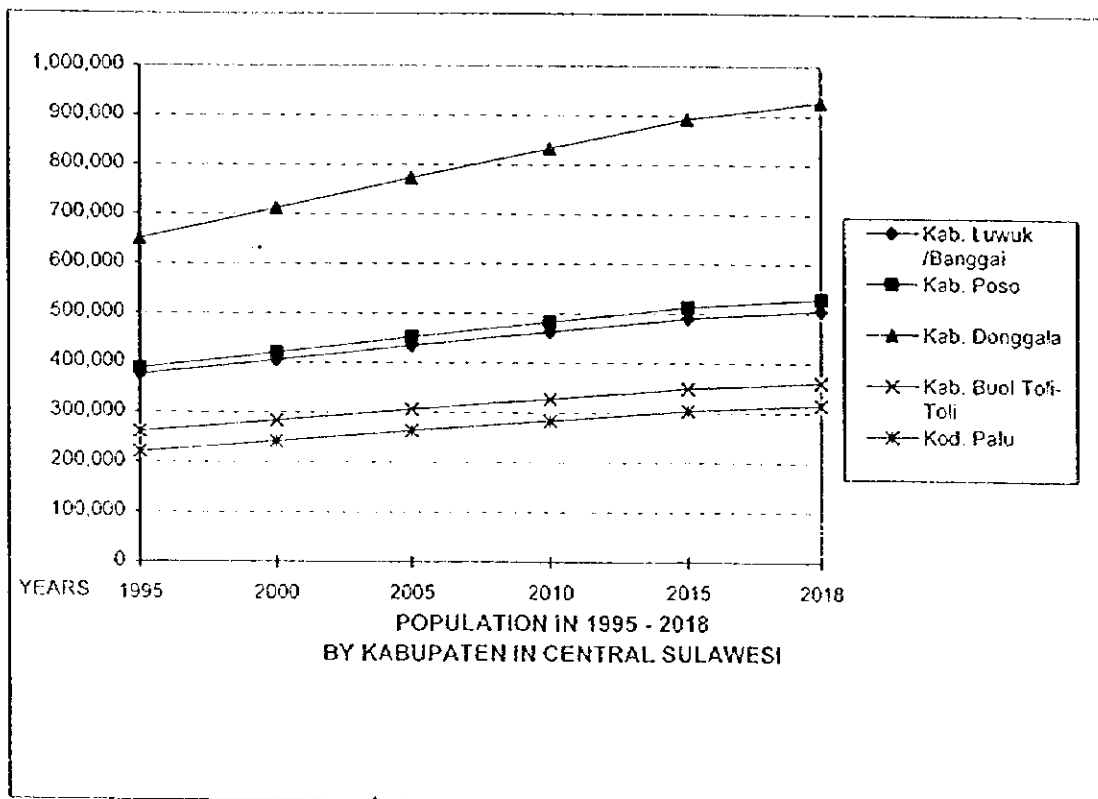
Source: JICA Study Team

**Figure 3-2-11 Population in 1995 – 2018 by Province in Sulawesi**



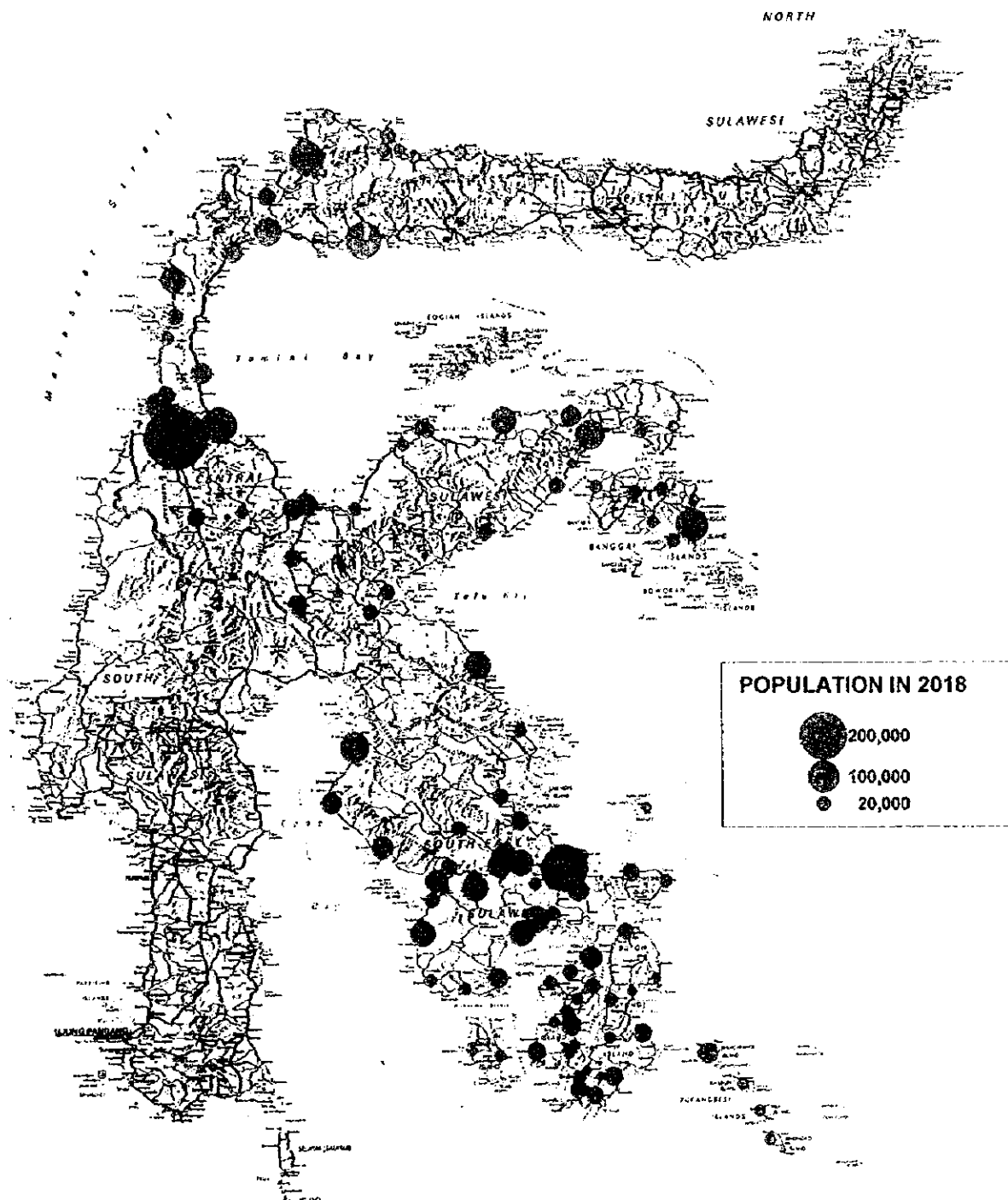
Source : JICA Study Team

Figure 3-2-12 Population in 1995-2018 by Kabupaten in Southeast Sulawesi



Source: JICA Study Team

Figure 3-2-13 Population in 1995-2018 by Kabupaten in Central Sulawesi



**Figure 3-2-14 Population in 2018 by Kecamatan in Central Sulawesi and Southeast Sulawesi**

Source: JICA Study Team