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Family Planning,  
and Health Indicators  
in Indonesia  
1961-1994**

**Central Bureau of Statistics**

**State Ministry of Population/  
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**Demographic and Health Surveys  
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Macro International Inc.  
Calverton, Maryland, USA

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## Glossary

- CBS**            **Central Bureau of Statistics.** The implementing agency for Indonesian population censuses and demographic surveys.
- DHS**            **Demographic and Health Surveys.** A worldwide project designed to collect, analyze and disseminate demographic data on fertility, family planning, and maternal and child health. DHS is funded primarily by the U.S. Agency for International Development.
- IDHS**          **Indonesia Demographic and Health Survey.** Survey carried out by the CBS in 1991 and 1994. These surveys were designed to provide estimates of important variables at the national and provincial levels, and for urban and rural areas of the three regions, according to family planning program development, namely Java-Bali, Outer Java-Bali I, and Outer Java-Bali II.
- IFS**            **Indonesia Fertility Survey.** Survey was carried out in the six provinces of Java-Bali in 1976. The sample for this survey was drawn from the 1976 Supas sample. The IFS was conducted under the auspices of the World Fertility Survey (WFS) program.
- MOH**          **Ministry of Health**
- NFPCB**        **National Family Planning Coordinating Board**
- NICPS**        **National Indonesia Contraceptive Prevalence Survey.** The first survey in Indonesia carried out under the DHS program in 1987. The NICPS was designed to reflect the regional classification of the family planning program, namely Java-Bali, Outer Java-Bali I, and Outer Java-Bali II. For this reason, some provinces with small populations in the Outer Java-Bali regions were excluded from the survey. They are Jambi, East Nusa Tenggara, East Timor, Central Kalimantan, East Kalimantan, Maluku and Irian Jaya.
- Supas**        **Intercensal Population Survey.** Survey carried out by the CBS in 1976 and 1985.
- Susenas**      **National Socioeconomic Survey.** A large-scale annual household survey carried out by CBS; provided a sampling frame for 1976 and 1985 Supas surveys, as well as 1987 and 1994 DHS surveys.
- USAID**        **United States Agency for International Development**
- WFS**           **World Fertility Survey.** Program implemented by the International Statistical Institute from 1972-1984; initiated and funded primarily by USAID.



# 1 Introduction

This report highlights important trends in key population, family planning, and health indicators in Indonesia over the past two decades. It was prepared with the primary objective of providing information needed by policymakers and program administrators to assess the current situation and to design more effective population, family planning, and maternal and child health programs. In particular, the report addresses the prevailing demographic situation and describes trends in fertility, family planning, maternal and child health, and infant and child mortality.

Nationally representative demographic data have been collected in Indonesia since 1961, starting with the first population census conducted after Indonesia proclaimed its independence in 1945. The second census was carried out in 1971. Since then, population censuses have been carried out in 1980 and 1990. During the intercensal periods, demographic surveys were implemented to fill the gap in population data. The Government of Indonesia participated in the Demographic and Health Surveys (DHS) program in 1987<sup>1</sup>, 1991 and 1994. This report draws data from various sources, including the population censuses, the 1976 and 1985 Intercensal Population Surveys (Supas), and the three Indonesia DHS surveys. The data presented show trends in demographic, family planning, and maternal and child health conditions over a period of approximately two decades.

The report begins with a brief description of current population, family planning, and health policies and programs, including targets, goals, and achievements. Chapter 2 presents information on the demographic, social, and economic indicators of the country to help in understanding the various national and regional trends discussed in the report.

Although a large body of data are available from the censuses and surveys, this report addresses only those data which have a substantial impact on family planning and health programs. The analysis is also limited by the availability of data. Although all of the censuses and surveys were implemented by the Central Bureau of Statistics (CBS), there are differences in survey methodology, geographic coverage, and estimation methods that may affect the results. Nevertheless, for purposes of this trend study, estimates based on the CBS population censuses and surveys are presented alongside those of the Indonesia DHS (IDHS) surveys.

## 1.1 Population and Family Planning Policies and Programs

Development policies in the area of population include reducing the population growth rate and effecting a more balanced distribution of the population across regions, both of which are expected to improve the quality of life of the Indonesian people. Overall, the rate of population growth decreased from 2.3 percent in the 1970s to 2.0 percent in the 1980s; by 1994, it was estimated at 1.7 percent.

A major factor in reducing population growth was the introduction of family planning programs in 1970. Family planning programs were not initiated simultaneously throughout the

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<sup>1</sup> The 1987 Indonesia DHS is known as the National Indonesia Contraceptive Prevalence Survey (NICPS).



country. They began in the six provinces of Java-Bali in the first five-year development plan, which covered the period 1969-70 to 1973-74. In the next five-year plan, the family planning programs were expanded to include 10 other provinces grouped together as the Outer Java-Bali I region. Family planning programs were further expanded to include the remaining 11 provinces in the following five-year development plan.<sup>2</sup> The proportion of married women using contraception increased from nil in 1965 to 55 percent in 1994. The Broad Guidelines Act Number 10/1992 and State Policy 1993 expand the goals of the family planning program to include greater emphasis on delaying marriage, wider use of contraception, and improving family welfare.

In the sixth five-year development plan (1994-95 to 1998-99) challenges are expected to continue. By the end of the century, the population is expected to exceed more than 210 million people. To meet this challenge the government of Indonesia plans to further reduce the annual population growth rate to 1.5 percent and the crude birth rate and crude death rate to 23 per 1,000 and 8 per 1,000 population, respectively.

## **1.2 Health Priorities and Programs**

As a result of expanded access to health facilities, the health of the Indonesian population has gradually improved over the past 25 years. The doctor-population ratio increased from 5 per million population in 1969-70 to 16 per million population in the early 1990s, and the number of public health centers increased from 6,277 in 1992-93 to 1,277 in 1968.

In the sixth five-year development plan (1994-95 to 1998-99) health development is directed toward continued improvement in the quality and accessibility of health services. Low-income groups, people living in remote and isolated areas, and people living in transmigration areas will receive special attention. In addition, efforts will be made to improve access to health services for young children, pregnant women, and the elderly.

The objectives of health development over the next five years include a further decline in infant mortality and an increase in life expectancy. By the end of the century, the infant mortality rate is expected to reach 50 deaths per 1,000 live births and life expectancy to reach 64.6 years. Other goals include a decrease in maternal mortality to 225 deaths per 100,000 births, and a decrease in the proportion of children under five years suffering from undernutrition, low birth weight, and iron deficiency.

In order to achieve these objectives, the government will draw strength from community participation and strive for improvements in health management.

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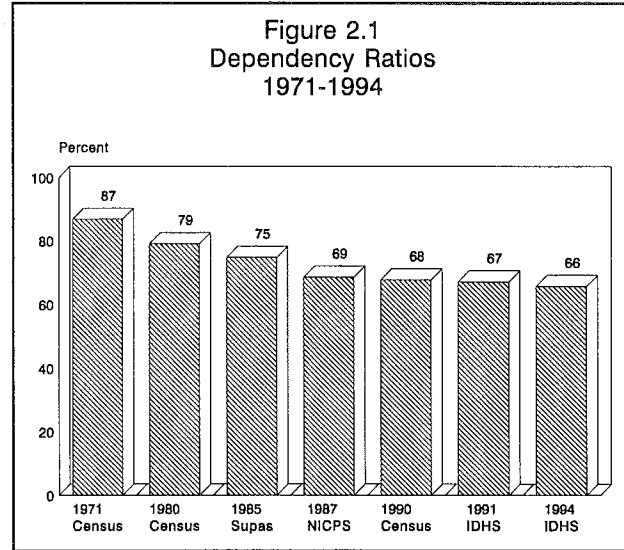
<sup>2</sup> The six provinces of *Java-Bali* are DKI Jakarta, West Java, Central Java, DI Yogyakarta, East Java, and Bali. *Outer Java-Bali I* includes Dista Aceh, North Sumatra, West Sumatra, South Sumatra, Lampung, West Nusa Tenggara, West Kalimantan, South Kalimantan, North Sulawesi, and South Sulawesi. *Outer Java-Bali II* includes Riau, Jambi, Bengkulu, East Nusa Tenggara, East Timor, East Kalimantan, Central Kalimantan, Central Sulawesi, Southeast Sulawesi, Maluku and Irian Jaya.

## 2 Demographic, Social and Economic Indicators

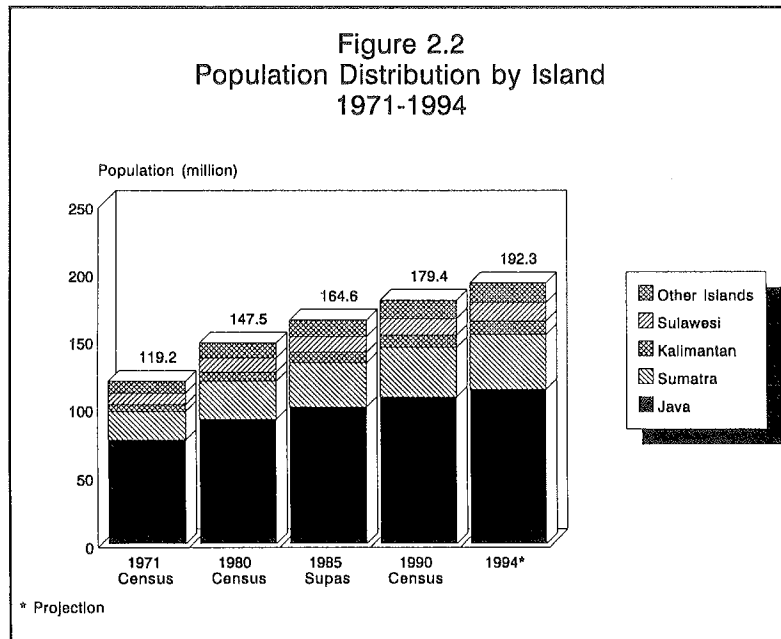
### 2.1 Population Growth and Geographic Distribution

With an estimated population of 192 million in 1994, Indonesia is the fourth largest country in the world after the Republic of China, India, and the USA. Between 1980 and 1990, the population grew at a rate of 2.0 percent annually, adding approximately 3.8 million population every year. If this rate continues, the population will double in 35 years, reaching 384 million in 2029.

The proportion of the population living in urban areas has gradually increased from 17 percent in 1971 to 22 percent in 1980. In 1990, 3 in 10 Indonesians, or 56 million people, were living in urban areas.



Partly as a result of fertility decline, the percentage of the population under 15 years has declined in the past 23 years from 44 percent in 1971 to 35 percent in 1994. At the same time, the



proportion age 15-64 has increased, resulting in a decline in the dependency ratio—the number of persons 0-14 years and 65 years and over per 100 persons in the 15-64 year group—from 87 in 1971 to 66 in 1994. The smaller dependency ratio indicates a lessening of the economic burden on persons in the productive age group who support those in the nonproductive age groups (see Figure 2.1).

One characteristic of Indonesia which persists over the years is the uneven distribution of the population among the islands. In 1961, 65 percent of the population

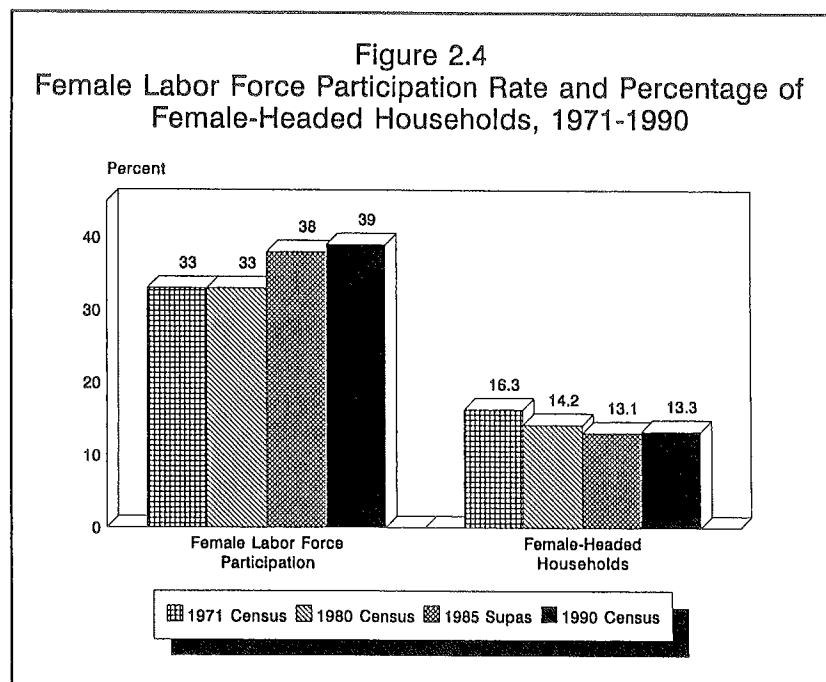
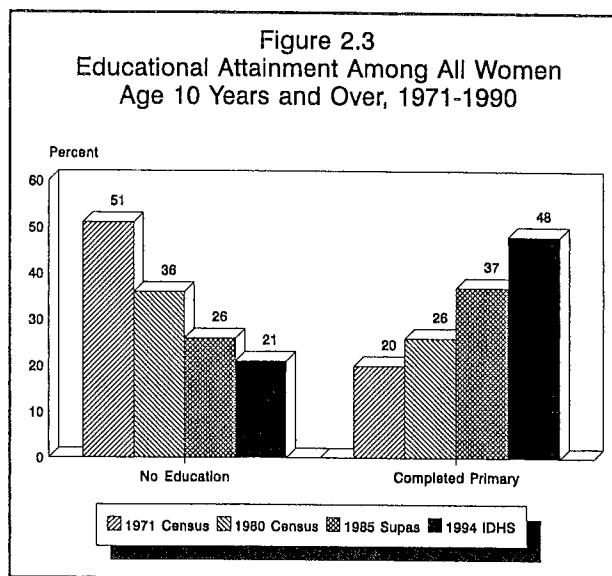
lived in Java; in 1994, this had dropped to 60 percent, or 108 million people. It should be noted that although Java covers only 7 percent of the country's land area, it is one of the most densely populated islands in the world. Over time, the proportion of people living in Java has decreased while the proportion living on other islands has increased. For example, while 17 percent of the population lived in Sumatra in 1971, the proportion increased to 20 percent in 1990 (see Figure 2.2).

## 2.2 Social and Economic Indicators

Indonesia has been undergoing rapid economic growth for more than twenty-five years, largely due to the export of crude oil and natural gas in the early 1980s. The per capita income increased from US \$50 in 1968 to \$385 in 1986, and to \$842 in 1993. Export value increased from \$1 billion in 1970 to \$37 billion in 1993. At the same time, import value increased from \$1 billion in 1970 to \$29 billion in 1992.

Education, especially of women, is closely associated with income, fertility, use of contraception, and the health status of children. There have been substantial improvements in education throughout the country, in urban and rural areas, and among both boys and girls. Literacy rates for males 10 years and over have risen from 72 percent in 1971 to 90 percent in 1990; the corresponding figures for females are 50 percent and 79 percent.

In 1971, only about half of Indonesian women had any formal schooling. By 1994, 79 percent had attended school. Women were more than twice as likely to have completed primary education in 1994 (48 percent), compared with 1971 (20 percent) (see Figure 2.3).



While there has been no significant change in the labor force participation rate for men since 1971, an increasing proportion of women participated in paid employment between 1971 and 1990—from 33 percent in 1971 to 39 percent in 1990 (see Figure 2.4). The most common occupations for women in urban areas are services and wholesale trade, together accounting for two-thirds of women in the work force. In rural areas, about two-thirds of women are engaged in agriculture.

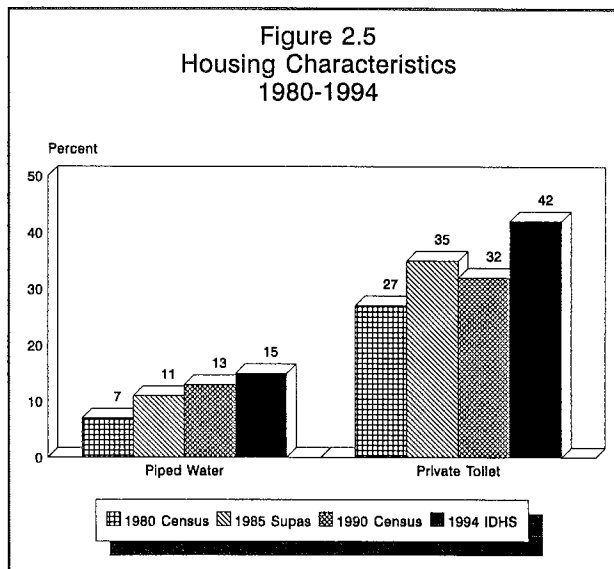
The proportion of households headed by a woman has declined from 16 percent in 1971 to 13 percent in 1990 (see Figure 2.4). The proportion has not changed substantially in recent years. The Indonesia DHS surveys indicate that urban households are more likely to have a female head than rural households.

### 2.3 Housing Characteristics and Household Amenities

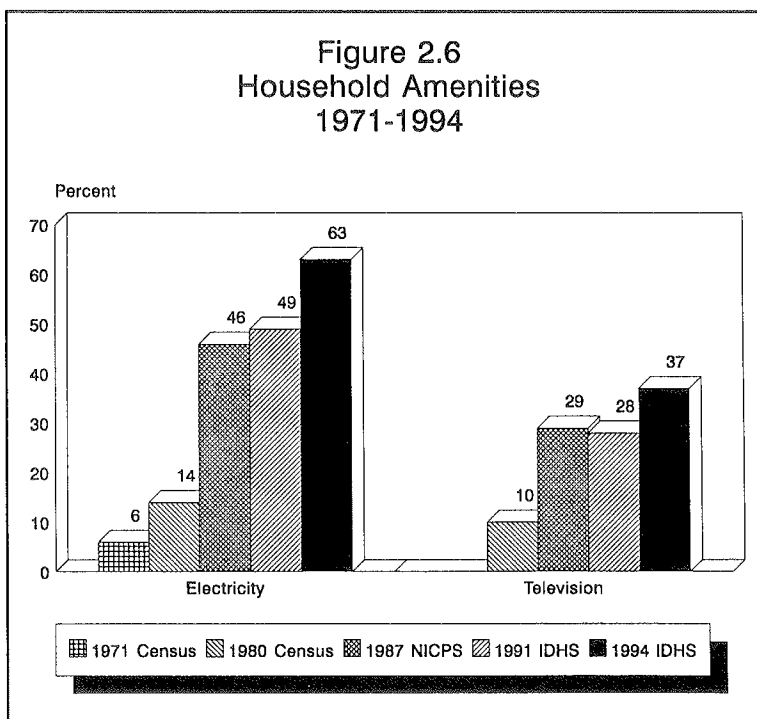
Figure 2.5 presents data about selected housing characteristics that have a substantial impact on the health status of household members. Proper hygiene and sanitation practices can help prevent major childhood diseases such as diarrhea.

Between 1980 and 1994, use of piped water for drinking purposes more than doubled, from 7 to 15 percent. Over the same period, the proportion of households with a private toilet increased from 27 to 42 percent. Urban households are more than twice as likely as rural households to have a private toilet (data not shown).

Electricity has become more widely available in Indonesian households. In 1971, less than 10 percent of households had access to electricity. Twenty-three years later, the proportion had increased to 63 percent (see Figure 2.6).



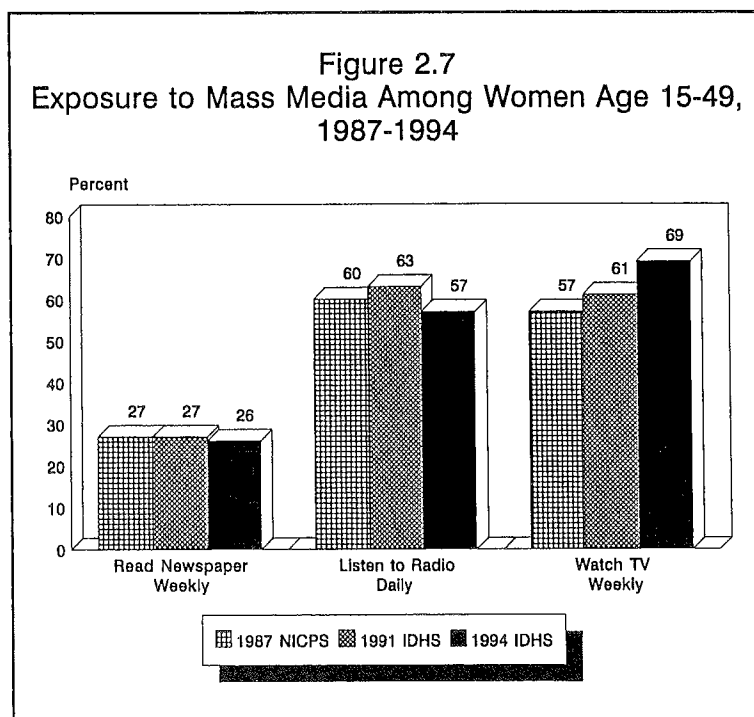
The presence of various durable goods in the household is an important socioeconomic indicator. Television, for example, was only available in 10 percent of households in 1980; in 1994, 37 percent of households had a television set.



## 2.4 Exposure to Mass Media

Exposure to mass media is a useful indicator for program planners, providing information about which women are likely to be reached by the media for diffusion of family planning, health and other information.

In Indonesia, radio and television are more popular than printed materials. Between 1987 and 1994, the role of television as a communication media became more significant due to longer broadcast hours and the availability of new television stations. In 1987, the most popular communication media was the radio (60 percent), while in 1994, television had the lead role (69 percent) (see Figure 2.7).



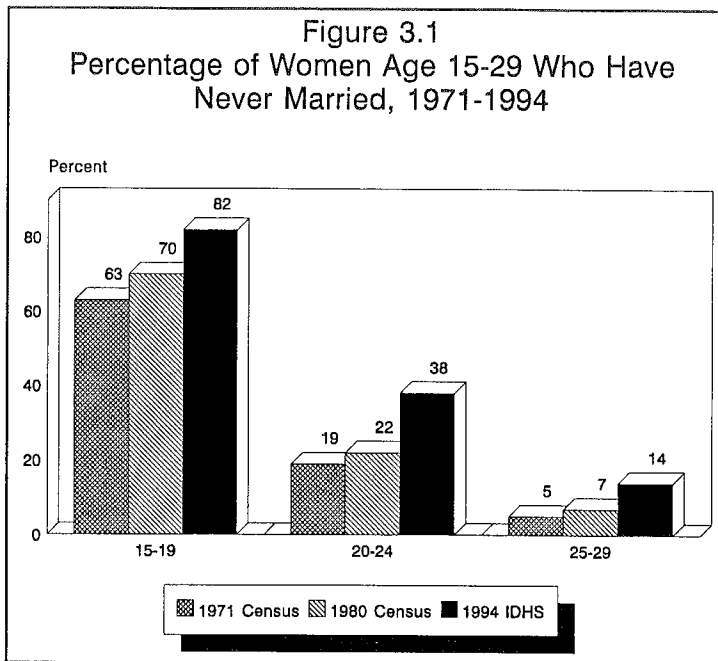
### 3 Marriage Patterns

#### 3.1 Marital Status

Marriage and widowhood are demographic events that influence exposure to pregnancy and thereby affect fertility.

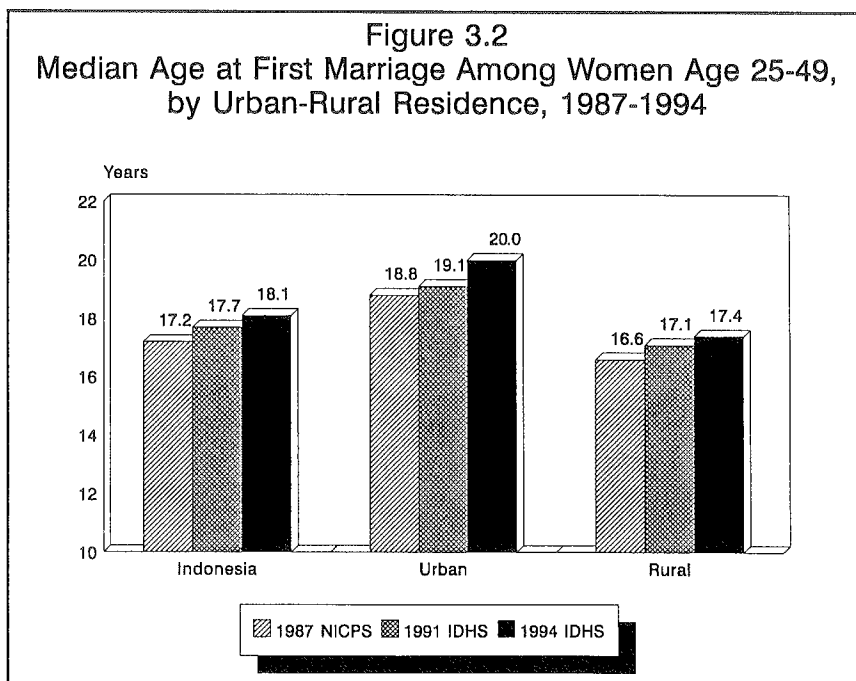
Marriage is universal in Indonesia. Only about one percent of women never marry. This proportion has not changed in the last 20 years. The majority of women are married by age 20; less than 5 percent remain single after age 30.

Over time, age at marriage has increased substantially. For example, 63 percent of women 15-19 were unmarried in 1971, compared with 82 percent in 1994. The proportion of women who were single at age 25-29 in 1994 is 14 percent, almost three times the corresponding proportion in 1971 (5 percent) (see Figure 3.1).



#### 3.2 Age at First Marriage

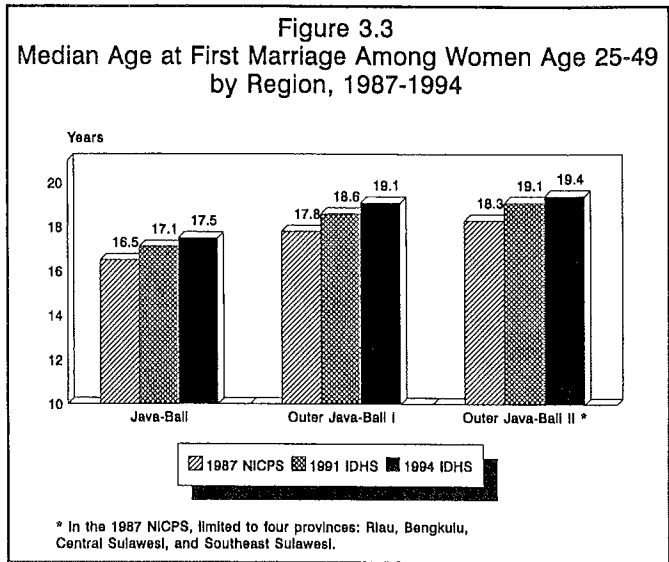
Differentials in age at first marriage according to urban-rural residence and region are presented in Figures 3.2 and 3.3. The median age at first marriage is the age at which 50 percent of women in the age group  $x$  to  $x+4$  have been married. Overall, the 1994 Indonesia DHS data indicate that age at first marriage is increasing as women are marrying at older ages (i.e., delaying marriage). The increase in age at first marriage has occurred throughout the country.



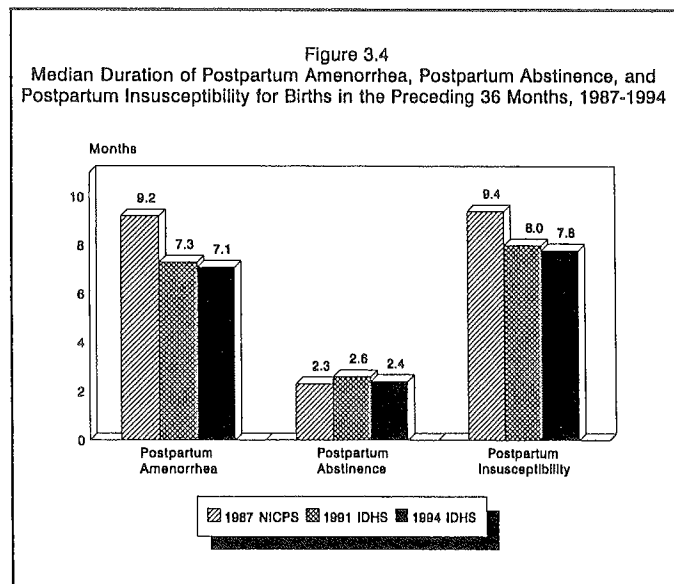
Urban women generally marry at least two years later than their rural counterparts. This pattern was observed in all three Indonesia DHS surveys. In the seven years between 1987 and 1994, the pace of increase in the median age at first marriage among urban women was faster than that of rural women, thus widening the gap from 2.2 to 2.6 years (see Figure 3.2).

Women in Outer Java-Bali II marry later than women in other parts of the country (19.4 years), while women in Java-Bali marry at the youngest age—17.5 years (see Figure 3.3). It should be noted, however, that in the 1987 NICPS, only four of the 11 provinces in the Outer Java-Bali II region were included. Data from the 1990 Population Census showed that age at first marriage in the seven provinces excluded from the 1987 NICPS was on average higher than that in the four provinces. Thus, age at first marriage in the Outer Java-Bali II region might have been higher in the 1987 NICPS if all the provinces had been included.

The low age at first marriage of women in Java-Bali may be due to the young age at which women in West Java and East Java marry (17 years or younger). Between 1987 and 1994, the median age at first marriage among women in Outer Java-Bali I increased significantly (1.3 years), narrowing the gap between women in this region and women in Outer Java-Bali II (see Figure 3.3).



### 3.3 Postpartum Amenorrhea, Postpartum Abstinence and Postpartum Insusceptibility



Among women who are not using contraception, exposure to the risk of pregnancy in the period following a birth is influenced by two factors: breastfeeding and sexual abstinence. Postpartum protection from conception can be prolonged by breastfeeding—which can lengthen the duration of amenorrhea—and by delaying the resumption of sexual relations.

Postpartum amenorrhea, the period between delivery and the resumption of the woman’s menstrual cycle, is becoming shorter in Indonesia. While the median duration was 9.2 months in 1987, it was two months shorter in 1994 (see Figure 3.4).

Over the same time, the median length of postpartum abstinence, the period between delivery and the resumption of sexual intercourse, stayed more or less constant at just over two months.

Women are said to be insusceptible to the risk of pregnancy if they are either amenorrheic or abstaining following delivery. Between 1987 and 1994, the period of postpartum insusceptibility became shorter, from 9.4 months in 1987 to 7.8 months in 1994. The decline in postpartum insusceptibility is primarily due to shorter postpartum amenorrhea.





## 4 Fertility

### 4.1 Total Fertility Rates

The total fertility rate (TFR) is an estimate of the average number of births a woman would have at the end of her reproductive years if the current age-specific fertility rates prevailed.

Figure 4.1 shows the trend in fertility based on results from selected sources. These rates are not strictly comparable because of differences in data collection procedures, geographic coverage, estimation techniques, and time reference. Estimates from the NICPS and IDHS surveys were based on information from birth histories, and refer to the

three-year period preceding the survey. Estimates from the population censuses and other demographic surveys were calculated based on information about number of children ever born using the "own children" estimation technique, and refer to a period one to four years before the survey. Despite these differences, the estimates serve the purpose of reflecting recent fertility trends in Indonesia.

Fertility has undergone a substantial decline in the past 25 years. The fertility rate for the period 1991-94 was 2.9 births per woman, or half that reported for the period 1967-70 (5.6 births per woman). The pace of decline has varied over time. It was relatively slow prior to the mid-1970s, then accelerated in the late 1970s and early 1980s, and has slowed in recent years.

### 4.2 Age-Specific Fertility Rates

The decline in fertility continues to occur at all ages. However, the largest proportional decline (61 percent) was found among women in their teens, from 155 births per 1,000 women in the late 1960s to 61 per 1,000 in the early 1990s. The drop in fertility among teenagers is partly due to later marriages and increased use of contraception (see Figure 4.2).

Figure 4.1  
Total Fertility Rates for Women Age 15-49,  
1967-1994

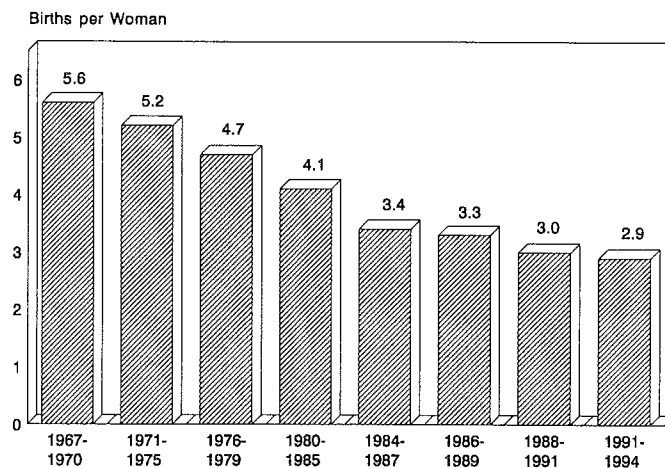
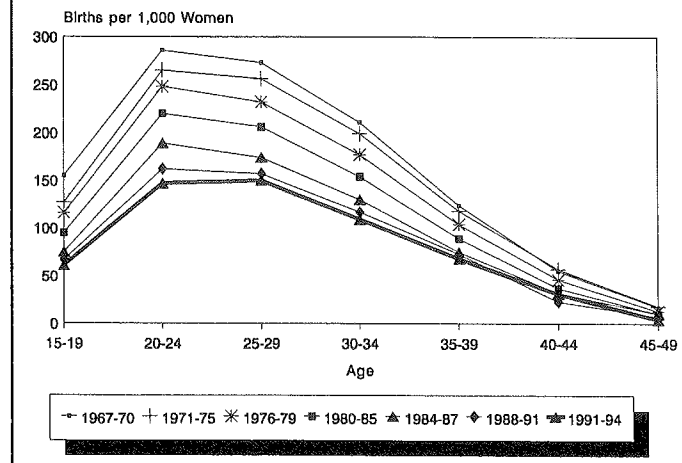


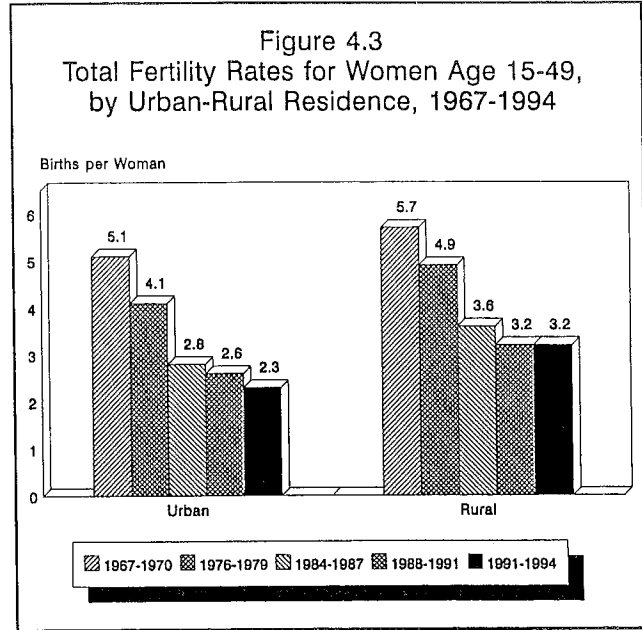
Figure 4.2  
Age-Specific Fertility Rates for Women Age 15-49,  
1967-1994



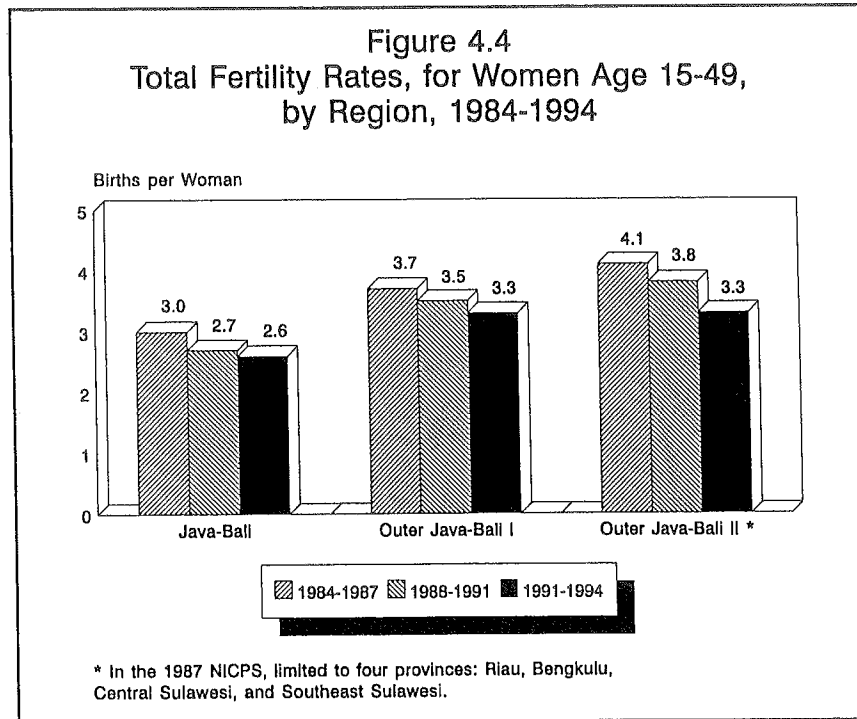
The available data indicate that the shape of the curve for age-specific fertility rates continues to flatten. Furthermore, the peak of the curve has shifted from the 20-24 year age group to the 25-29 year age group.

### 4.3 Fertility by Selected Characteristics

The IDHS data indicate that urban women have fewer children than their rural counterparts. However, because the decline in fertility among urban women has been more rapid than that of rural women, the gap in fertility between urban and rural women is widening. In the late 1960s, rural women had an average of 0.6 children more than urban women. In the early 1990s, the difference had increased to 0.9 children (see Figure 4.3).



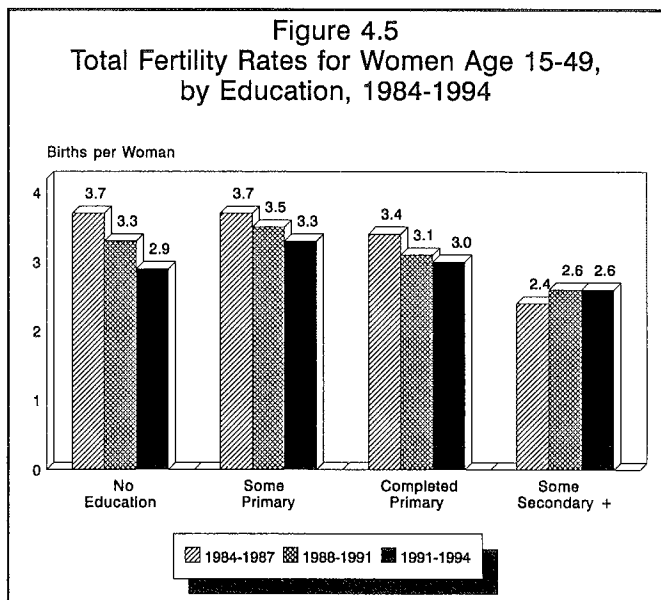
Women in Java-Bali have fewer births than women in other parts of the country. This was found in all the DHS surveys (see Figure 4.4). The 1994 IDHS data indicate that women in Java-Bali have 0.7 births less than women in other regions. It should be noted that the 1987 NICPS included only four of the 11 provinces in the Outer Java-Bali II region, namely Riau, Bengkulu, Central Sulawesi, and Southeast Sulawesi. Fertility estimates for the remaining seven provinces in this region based on the 1990 Population Census data are higher than those for the four provinces in the 1987 NICPS. Including all of the provinces in the 1987 survey would have increased the fertility rate for the Outer Java-Bali II region.



The decline in fertility varies by region. It has occurred faster in the Outer Java-Bali II region than in other regions, resulting in smaller differentials between the regions. While the gap in fertility between the Java-Bali region and the Outer Java-Bali II region in 1987 was 1.1 births, in 1994 the difference had declined to 0.7 births.

The 1994 IDHS results show that fertility is closely associated with women's education, taking the form of an inverted U-shaped curve. Fertility is lowest among women with no education and those with some secondary education, and peaks among women who have some primary education. A similar association was observed in previous surveys.

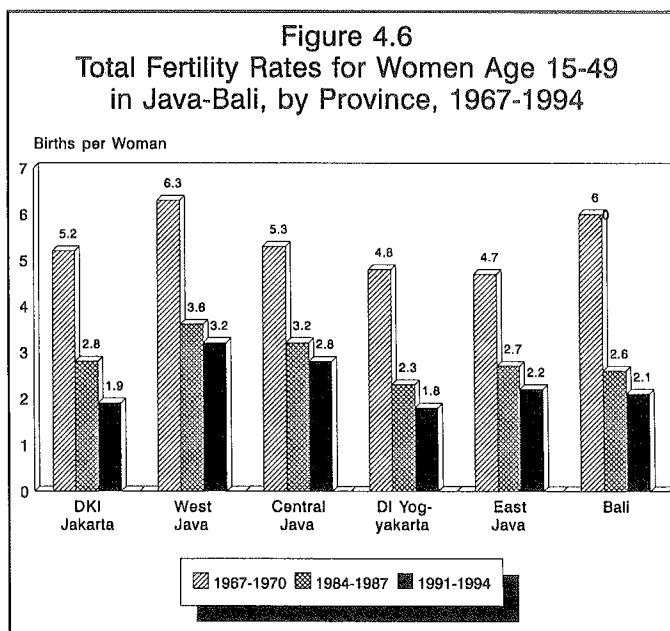
Due to the more rapid decline in fertility among women with no education, the gap in fertility between women with no education and those with some secondary education has narrowed significantly in the seven years between 1987 and 1994. In 1987, women who had never gone to school had an average of 1.3 children more than women who had attended secondary school. In 1994, the difference was only 0.3 children (see Figure 4.5).



#### 4.4 Total Fertility Rates in Java-Bali by Province

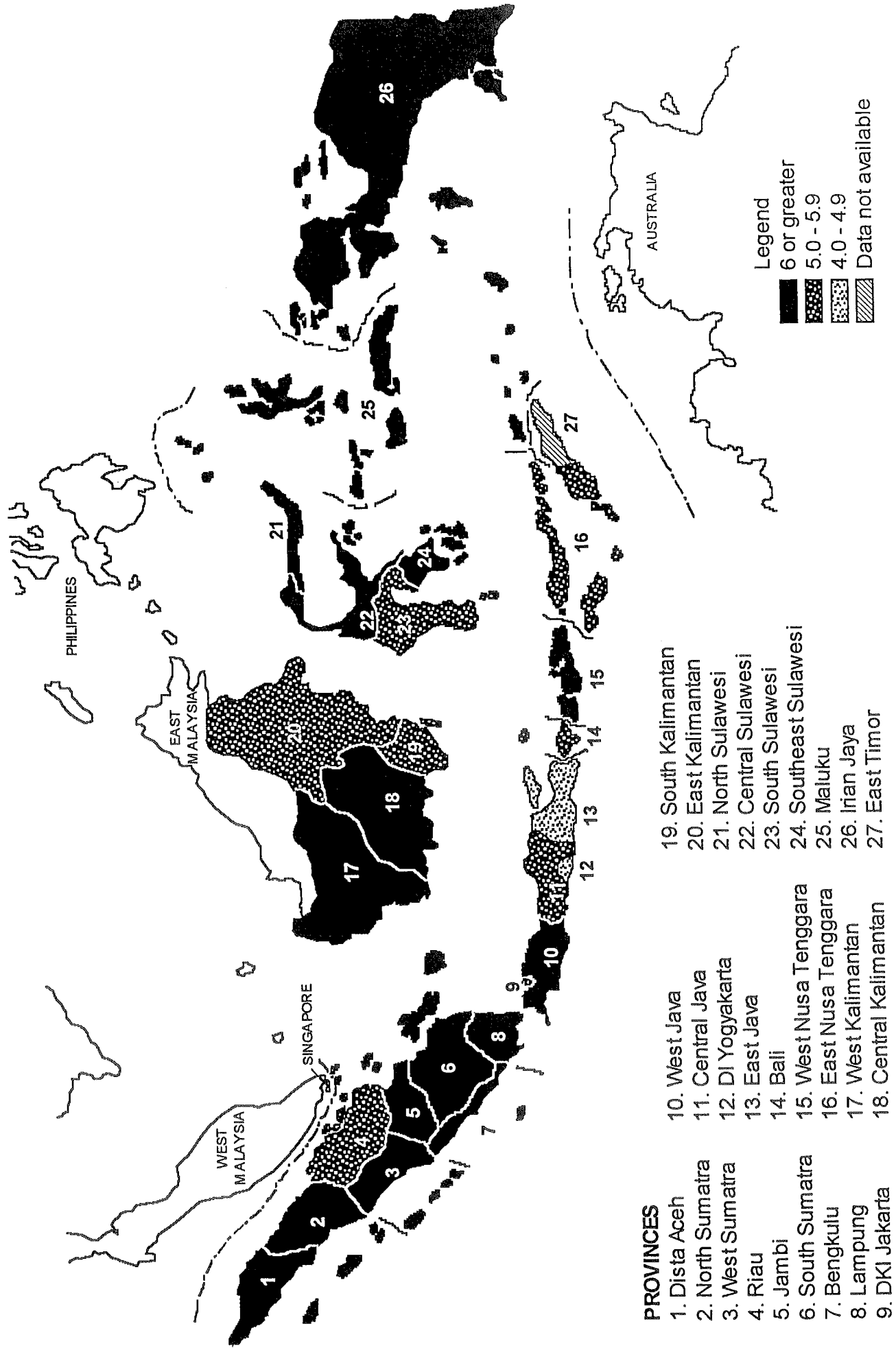
Among the six provinces in Java-Bali, two have reached a fertility level of less than 2 children per woman (DKI Jakarta and DI Yogyakarta), and two are approaching this level (Bali and East Java). West Java, on the other hand, continues to have the highest fertility in the region, higher than many other provinces in the country (see Figure 4.6). Although declining, fertility in Central Java is still relatively high compared with other provinces of the island.

It is interesting to note that in the late 1960s, Bali had the second highest fertility rate following West Java. By the early 1990s, Bali had the lowest fertility rate, while the fertility rate for West Java remained more than 3 births per woman.



Figures 4.7 and 4.8 are maps of Indonesia showing total fertility rates (TFR) by province for two periods: 1967-70 (based on the 1971 census) and 1991-94 (based on the 1994 IDHS). Figure

### 4.7 Total Fertility Rates by Province, 1967-1970

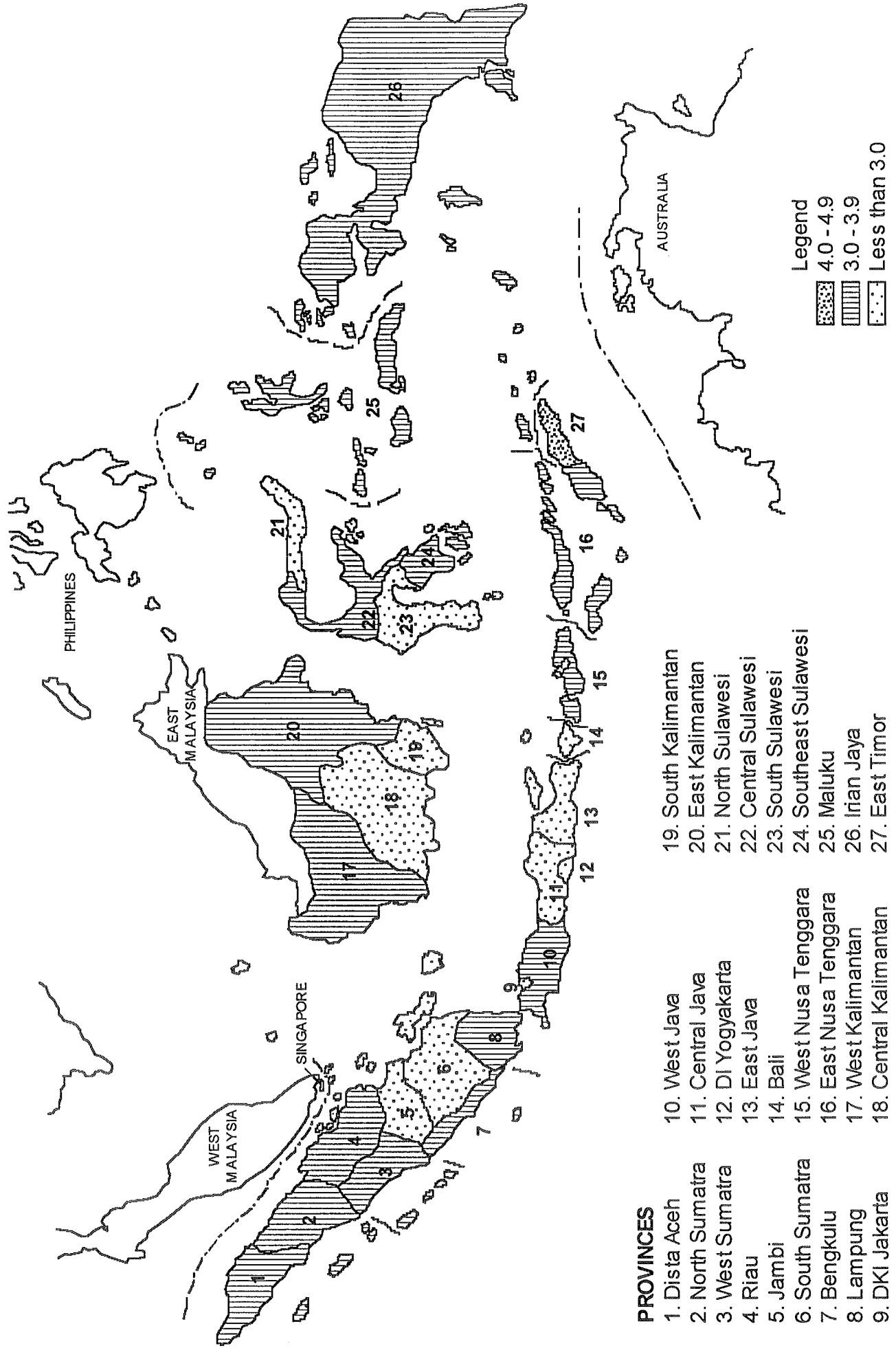


#### PROVINCES

- 1. Dista Aceh
- 2. North Sumatra
- 3. West Sumatra
- 4. Riau
- 5. Jambi
- 6. South Sumatra
- 7. Bengkulu
- 8. Lampung
- 9. DKI Jakarta
- 10. West Java
- 11. Central Java
- 12. DI Yogyakarta
- 13. East Java
- 14. Bali
- 15. West Nusa Tenggara
- 16. East Nusa Tenggara
- 17. West Kalimantan
- 18. Central Kalimantan
- 19. South Kalimantan
- 20. East Kalimantan
- 21. North Sulawesi
- 22. Central Sulawesi
- 23. South Sulawesi
- 24. Southeast Sulawesi
- 25. Maluku
- 26. Irian Jaya
- 27. East Timor

- Legend
- 6 or greater
  - 5.0 - 5.9
  - 4.0 - 4.9
  - Data not available

### 4.8 Total Fertility Rates by Province, 1991-1994



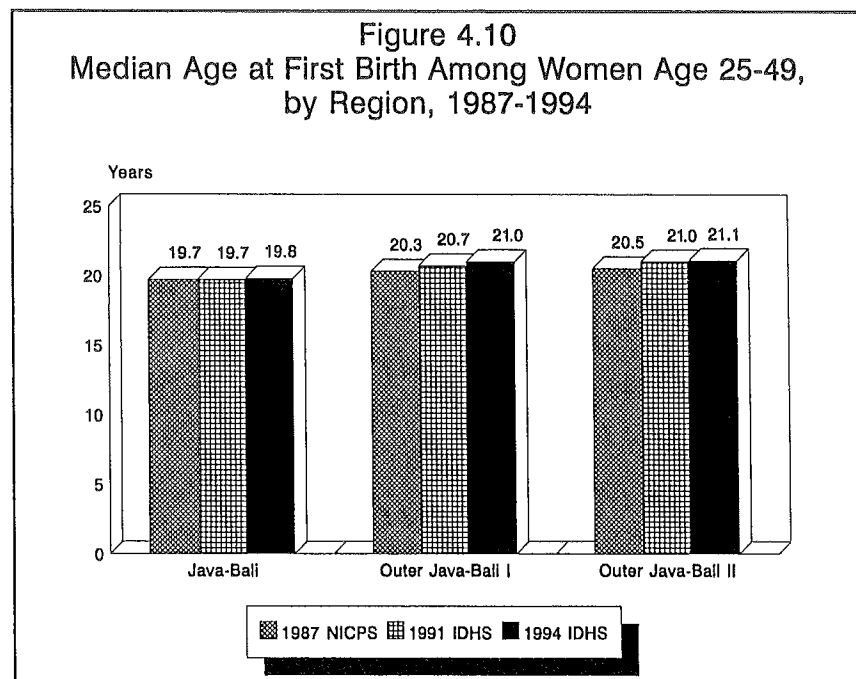
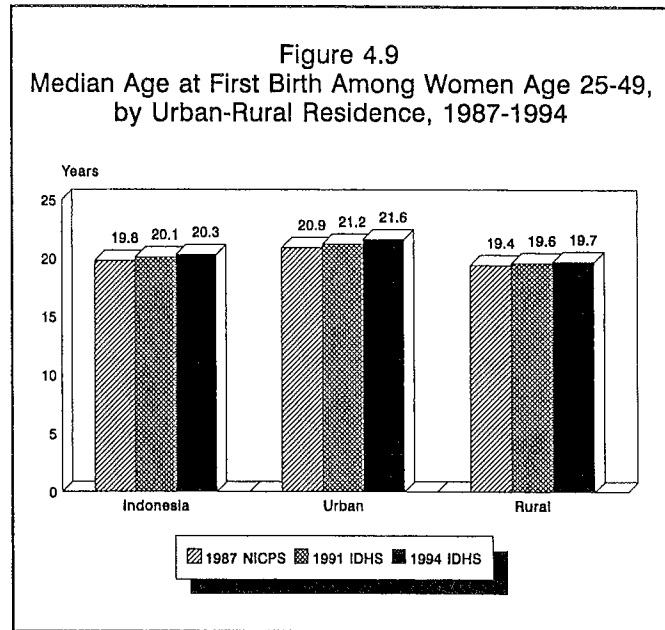
4.7 shows that in the period 1967-70, the TFR for most of the provinces was six or more births per woman, while eight provinces had a TFR of 5.0 to 5.9 births; only DI Yogyakarta and East Java had TFRs of less than 5 births per woman. Twenty-four years later, a dramatic change had taken place. All provinces but East Timor had reached a fertility level of less than 4 births per woman. Furthermore, DKI Jakarta and DI Yogyakarta have achieved a TFR of less than 2 births per woman (see Figure 4.8).

#### 4.5 Age at First Birth

In recent years, there has been a slight increase in the median age at which women start childbearing, from 19.8 years in 1987 to 20.3 years in 1994 (see Figure 4.9).

In general, urban women start childbearing two years later than rural women. Over the years, there has been little change in the gap in median age at first birth between urban and rural women; the gap was 1.5 years in 1987, compared with 1.9 years in 1994 (see Figure 4.9).

There are significant differences in age at first birth between women in Java-Bali and those in other parts of Indonesia, with women outside Java-Bali delaying their first birth more than a year longer than women in Java-Bali. In 1994, the median age at first birth for women in Java-Bali was 19.8 years, which is substantially lower than that of women in Outer Java-Bali (21 years). Age at first birth has remained essentially static in Java-Bali while increasing among women in Outer Java-Bali (see Figure 4.10).

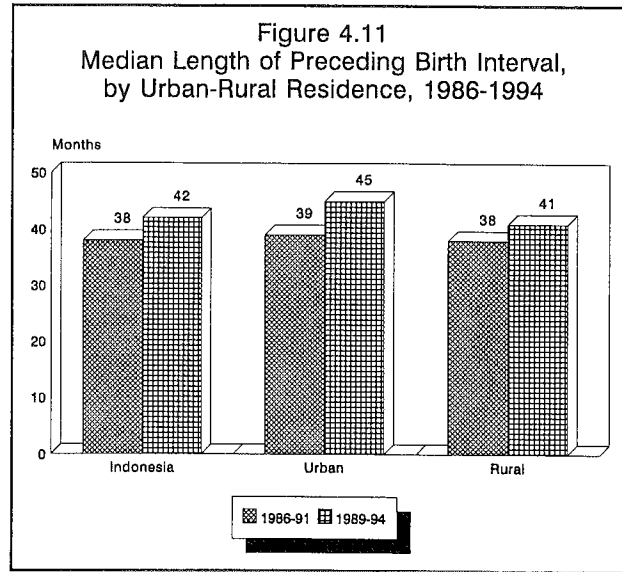


## 4.6 Birth Intervals

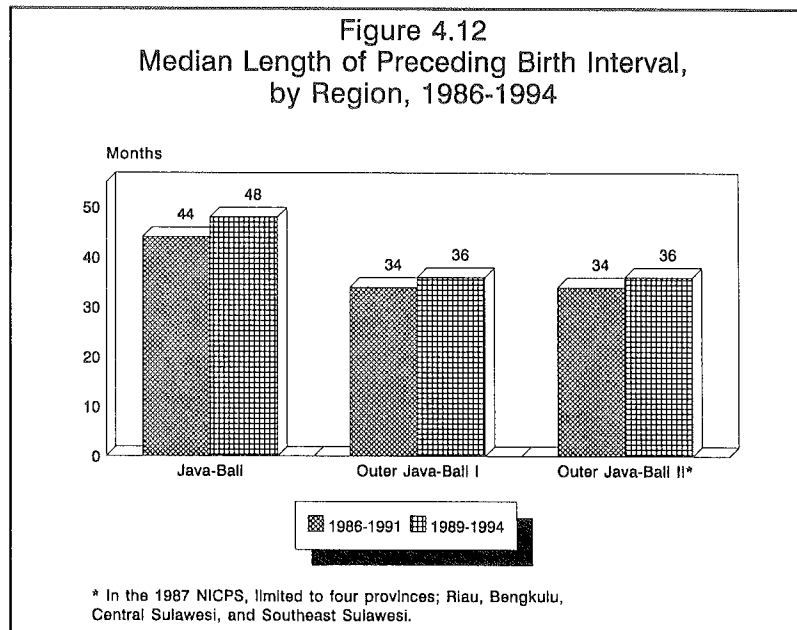
A child's health status is related to the length of the preceding birth interval. Children born shortly after a prior birth are at greater risk of illness and death than those born after a long interval. Further, the occurrence of closely spaced births gives the mother insufficient time to restore her health, which may limit her ability to take care of her children.

Overall, Indonesian women favor a relatively long birth interval—a median of 42 months for births in the period 1989-94. Of these births, 42 percent occurred four or more years after the birth of a preceding sibling, 41 percent after two to three years, and 17 percent less than two years after a previous birth (data not shown).

Data from the 1991 and 1994 IDHS indicate that the median interval between births has increased throughout Indonesia. The median birth interval is longer among urban births than among rural births (45 months compared with 41 months), and the gap has widened in recent years, from 1 month in 1991 to 4 months in 1994 (see Figure 4.11).



Birth intervals vary widely by region. Women in Java-Bali have significantly longer intervals between births than women in the Outer Java-Bali regions. In 1994, the median birth interval in Java-Bali was one year longer than in Outer Java-Bali—48 months, compared with 36 months (see Figure 4.12). The longer birth interval among women in Java-Bali can be attributed partly to the longer breastfeeding duration in that region—25.3 months, compared with 22.8 months or less in the other regions.



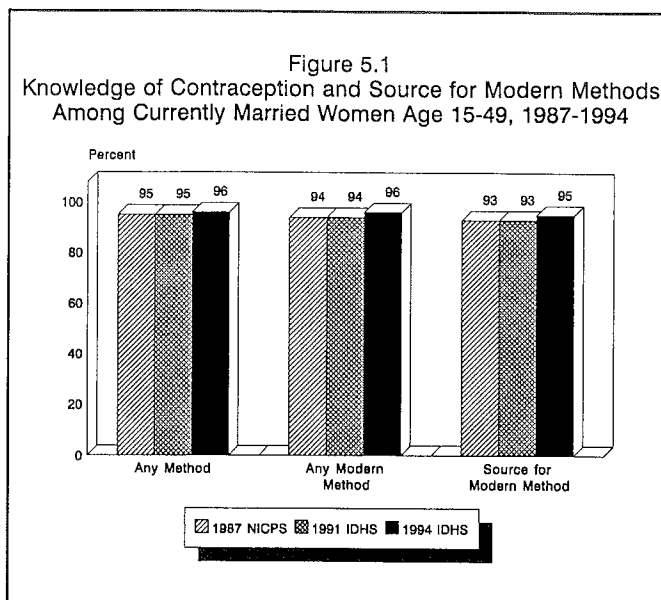




## 5 Family Planning

### 5.1 Knowledge of Family Planning

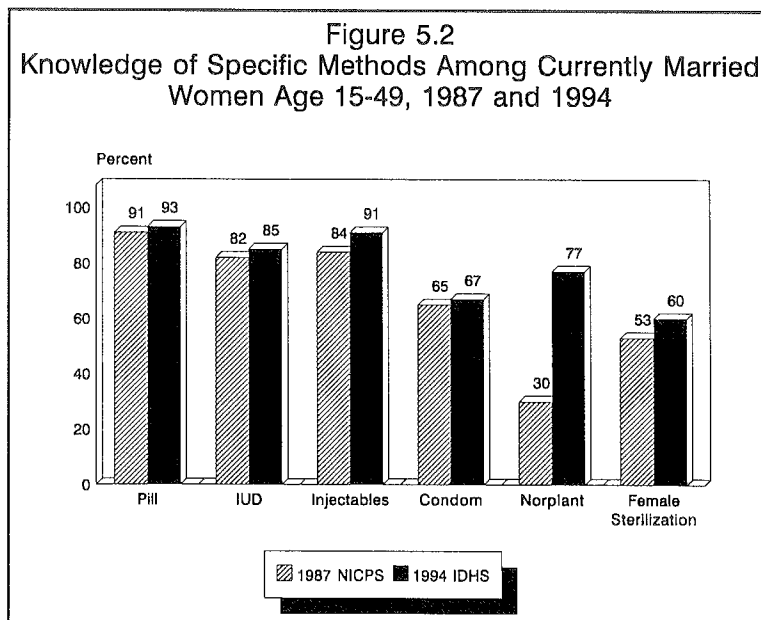
Information on knowledge of, attitudes about, and practice of contraception is of particular interest to policymakers, program managers, and researchers concerned with population and family planning. Familiarity with contraceptive methods is among the prerequisites for the adoption of fertility regulation. Information about contraceptive methods has been disseminated through various channels and mass media since the initiation of the national family planning program in 1970.



Knowledge of at least one contraceptive method is widespread in Indonesia. Most women who know of a contraceptive method know a modern method and 95 percent of currently married women also know where to go to obtain a family planning method (see Figure 5.1).

Modern contraceptive methods are widely known among Indonesian women. Since 1987, the pill, IUD, and injectables have been known to at least 8 in 10 married women.

Knowledge of Norplant, female sterilization, and male sterilization has increased substantially in recent years. Norplant was known to only 3 in 10 married women in 1987; in 1994, this proportion had increased to almost 4 of 5 married women. Knowledge of male sterilization remains relatively low. In 1994, while 6 in 10 women knew of female sterilization, less than 4 in 10 knew of male sterilization (see Figure 5.2).

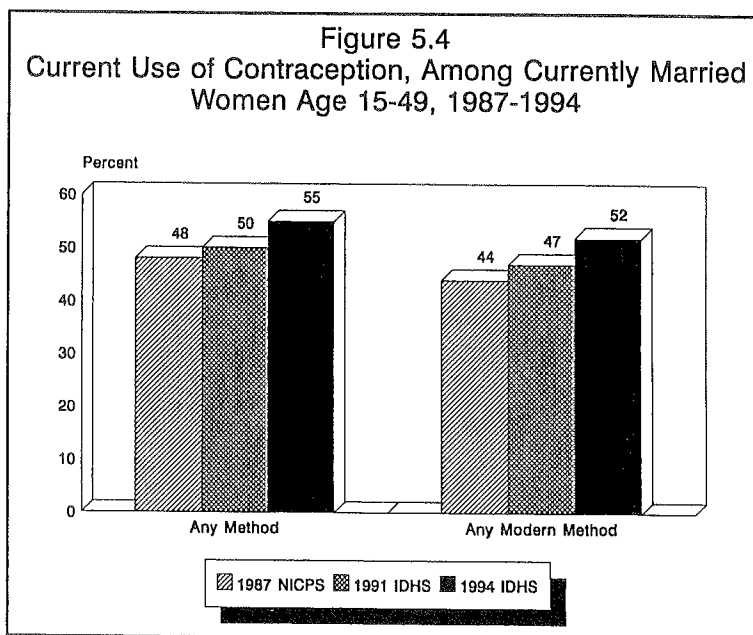
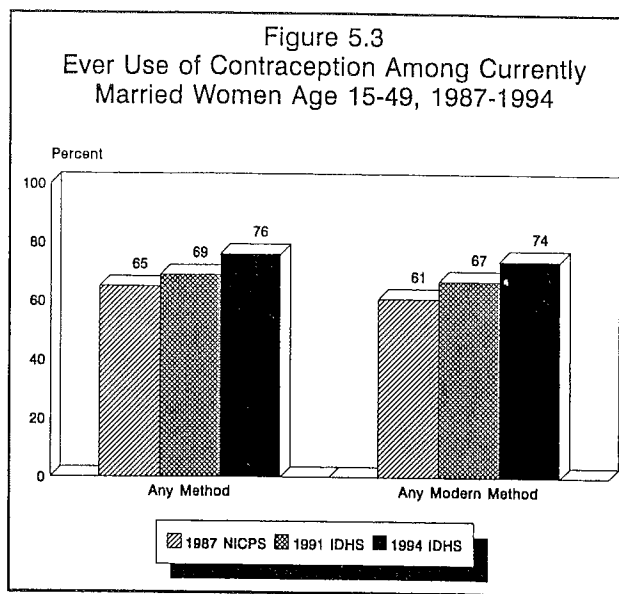


## 5.2 Ever Use of Family Planning

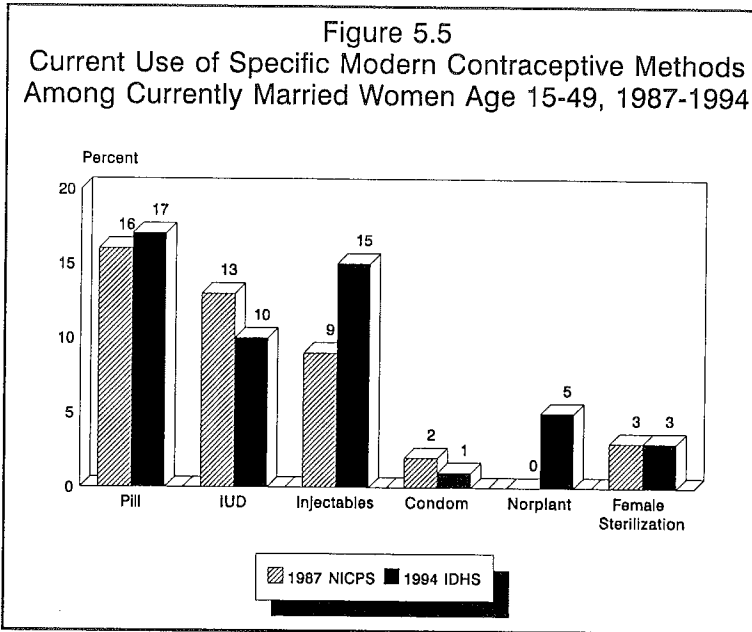
The proportion of married women who have ever used a method of contraception has increased significantly over the past decades (see Figure 5.3). In 1987, 65 percent of married women reported having used a family planning method. In 1994, this proportion had increased to 76 percent. The proportion of women who have used a modern method increased from 61 percent in 1987 to 74 percent in 1994.

## 5.3 Current Use of Family Planning

Information on the current level of contraceptive use is important for measuring the success of the national family planning movement. The proportion of married women age 15 to 49 who are current users of contraception increased from 48 percent in 1987 to 55 percent in 1994 (see Figure 5.4). In 1994, almost all of these women were using modern methods. Consequently, use of traditional methods is very limited, less than 4 percent.

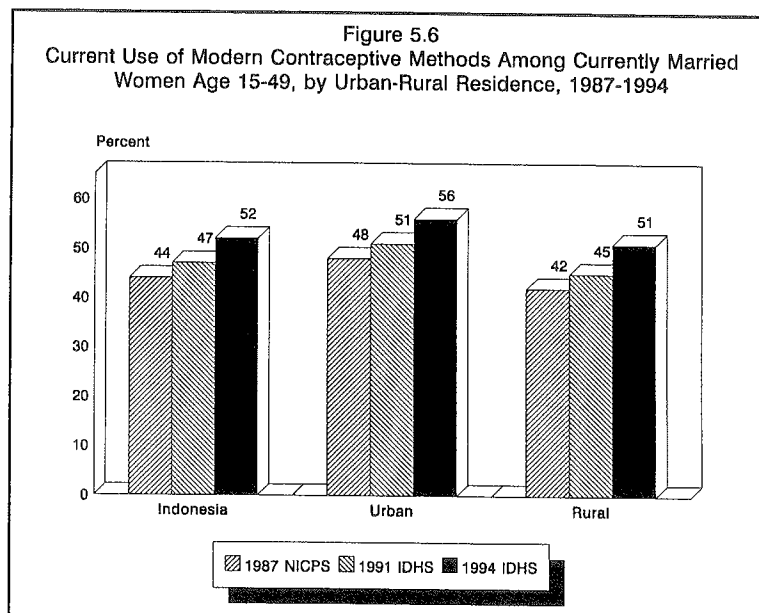


In 1994 the most commonly used methods among currently married women were the pill (17 percent), IUD (10 percent), and injectables (15 percent), together accounting for 78 percent of contraceptive use (see Figure 5.5). Injectables and Norplant gained popularity between 1987 and 1994. Use of injectables increased from 9 percent in 1987 to 15 percent in 1994; and, use of Norplant, which was negligible in 1987, increased to 5 percent in 1994. During the same period, the proportion of IUD users declined from 13 to 10 percent.



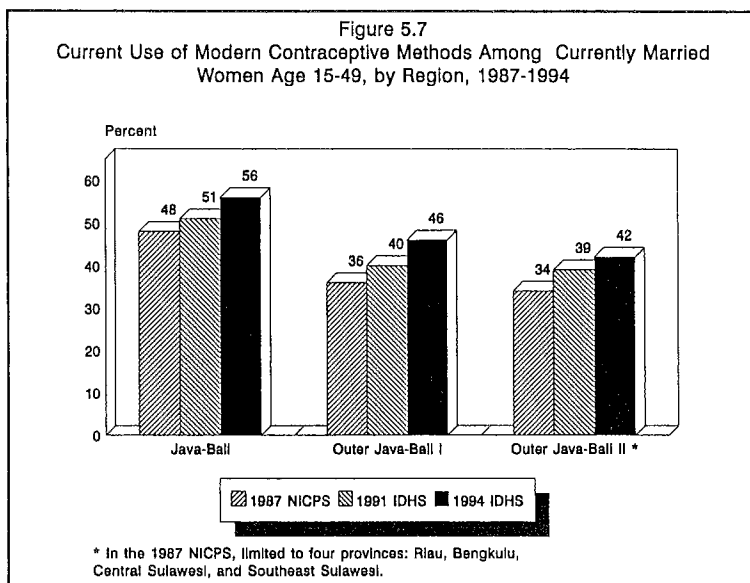
Use of modern family planning methods is higher among urban women than among rural women. For example, the 1994 IDHS data indicate that 56 percent of urban women were using modern methods, compared with 51 percent of rural women (see Figure 5.6). The difference in contraceptive use between urban and rural women did not change significantly between 1987 and 1994.

There are major differences in the use of contraception between regions. Contraceptive use is highest in Java-Bali, followed by Outer Java-Bali I and then Outer Java-Bali II. Not only is the level of contraceptive use higher in Java-Bali than in other regions, but women in Java-Bali tend to rely more on long-term methods than women in other regions. This is a reflection of the activities of the national family planning program, which began in Java-Bali, and expanded to the Outer Java-Bali I and Outer Java-Bali II regions at five-year intervals. It should be noted that the 1987 NICPS

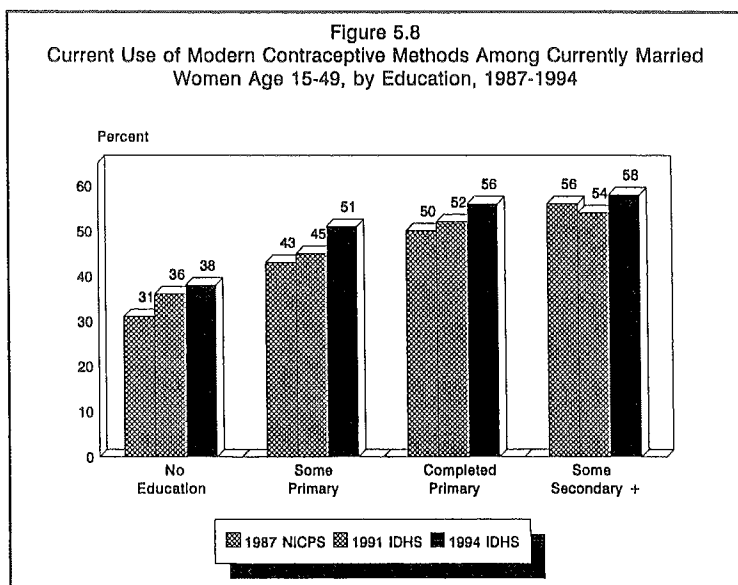


excluded seven provinces in the Outer Java-Bali II region, namely Jambi, Central Kalimantan, East Kalimantan, East Nusa Tenggara, East Timor, Maluku, and Irian Jaya.

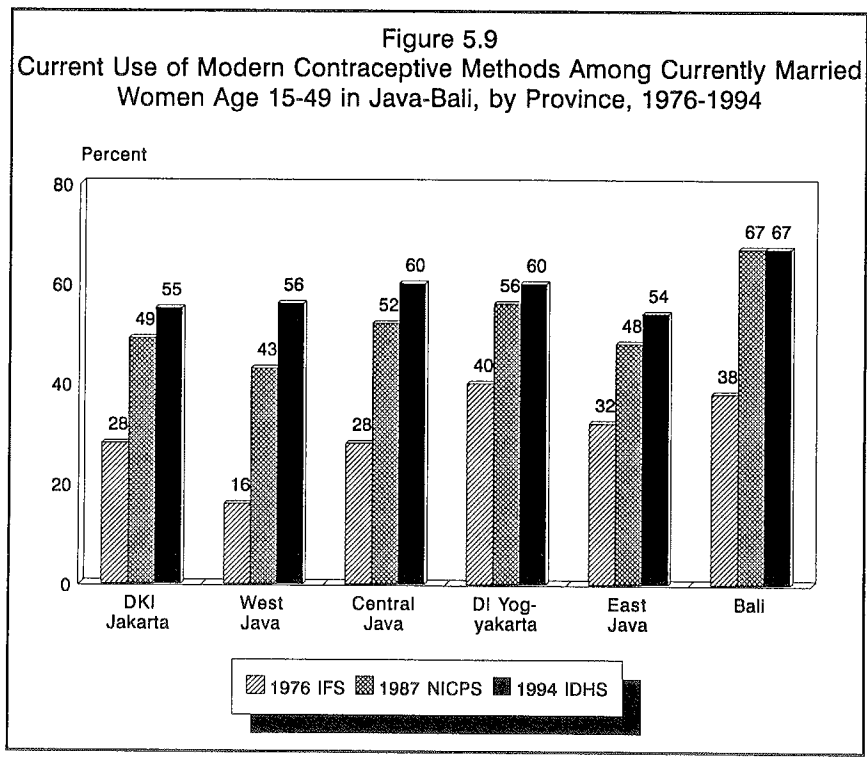
Figure 5.7 shows trends in the use of modern contraceptive methods by region. In 1994, 56 percent of married women in Java-Bali were using a modern method, compared with 46 percent in Outer Java-Bali I, and 42 percent in Outer Java-Bali II. Between 1987 and 1994, contraceptive use increased at a faster rate in the Outer Java-Bali I and Outer Java-Bali II than in Java-Bali.



Contraceptive use increases with the respondent's level of education. For example, in 1994, 38 percent of women with no education were using a modern contraceptive method, compared with 58 percent of women with some secondary education (see Figure 5.8). Although the use of family planning has increased for all women regardless of education, there is an inverse relationship between the size of the increase and the level of education. For example, between 1987 and 1994, women with no education had the largest overall increase, while those with the highest level of education had the smallest increase.



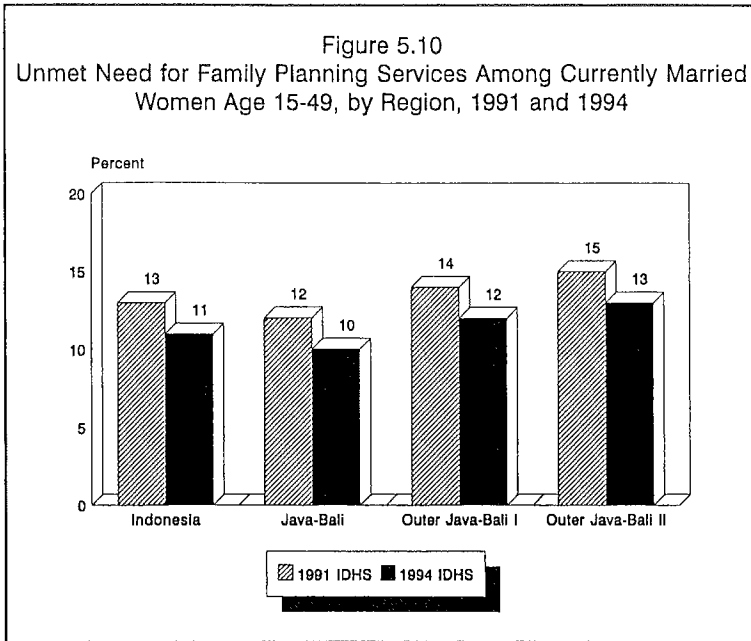
Trends in contraceptive use in the six provinces of Java-Bali can be observed since 1976, using data from the Indonesia Fertility Survey (IFS), which was conducted under the auspices of the World Fertility Survey (see Figure 5.9). The IFS was limited to the Java-Bali region. In the early years of the family planning program, contraceptive prevalence ranged from a low of 16 percent in West Java to a high of 40 percent in DI Yogyakarta. Among these women, 9 of 10 used a modern contraceptive method. In 1987, West Java continued to have the lowest rate of contraceptive use in Java-Bali. Between 1987 and 1994, while all provinces in this region showed an increase in contraceptive use over time, West Java gained the most (30 percent). Bali and DI Yogyakarta, provinces with the highest levels of use in 1987, showed little change in 1994.



#### 5.4 Unmet Need for Family Planning Services

Unmet need for family planning is broadly defined as the percentage of currently married women who do not use family planning although they do not want any more children or want to delay their next birth. According to this definition, in 1994, 11 percent of married Indonesian women had an unmet need for family planning, 5 percent for spacing and 6 percent for limiting births. The situation has changed little since 1991 when unmet need was 13 percent (see Figure 5.10).

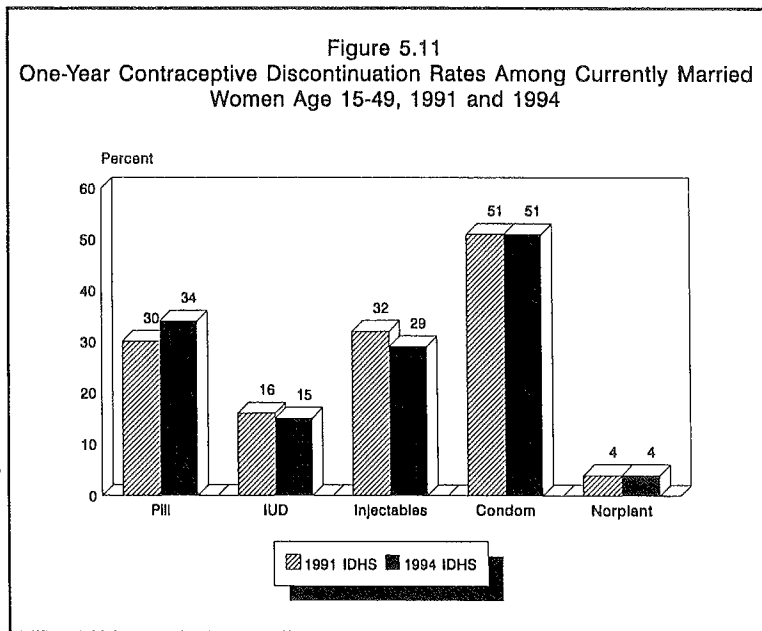
Women in Java-Bali are slightly less likely to have an unmet need for family planning than women in other regions—10 percent, compared with 12-13 percent—which may reflect the earlier initiation of family planning programs in that region.



## 5.5 Discontinuation Rates

Improvement in the quality of contraceptive use is one of the goals of family planning programs in Indonesia. One measure of the quality of use is the rate at which users discontinue using a family planning method.

Data from the 1994 Indonesia DHS survey indicate that 27 percent of women stopped using contraception within one year after starting use; this was unchanged from the 1991 IDHS. Of these, the most frequently cited reason for stopping is side effects or health reasons (10-11 percent). In 1994, 6 percent of women stopped using family planning because they wanted to become pregnant, whereas 3 percent reported becoming pregnant while using the contraceptive method (method failure). High rates of discontinuation, method failure and method switching may indicate that improvements are needed in counseling in the selection of methods, follow-up care, and accessibility of services.



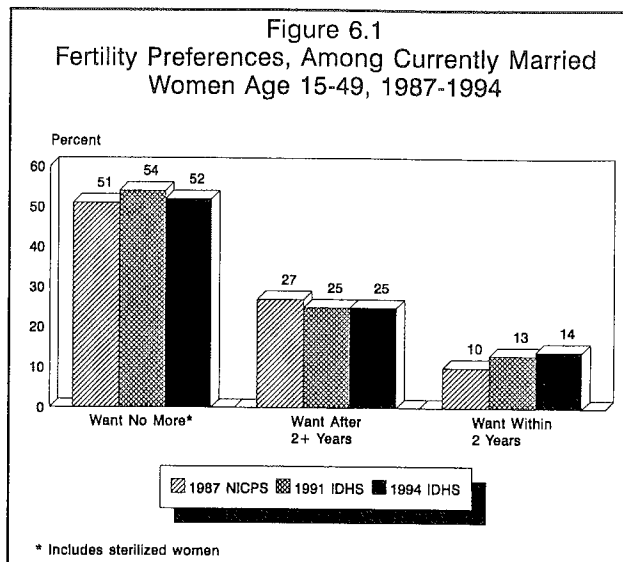
Rates of discontinuation vary by method and have changed little since 1991 (see Figure 5.11). The highest one-year discontinuation rate is for condom users (51 percent). The discontinuation rate for pill users increased slightly between 1991 and 1994 from 30 to 34 percent. At the same time, there was a slight decline in discontinuations by users of injectables and the IUD, while the rate for Norplant users remained 4 percent.

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## 6 Fertility Preferences

### 6.1 Desire for Children

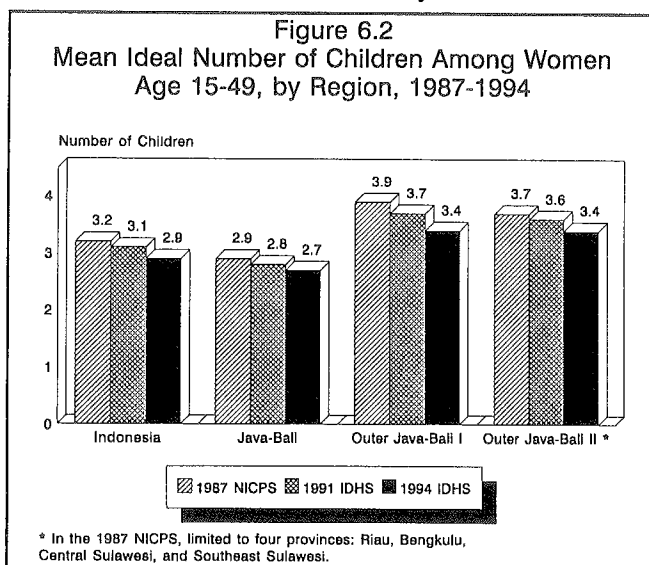
Data from the 1994 Indonesia DHS indicate that more than half of married women in Indonesia want to stop childbearing or have been sterilized, one in four wants to delay the next birth for at least two years, and 14 percent want to have another birth within two years (see Figure 6.1). Between 1987 and 1994, there was a slight decrease in the proportion of women who said they wanted to postpone the next birth, and a slight increase in the proportion who said they wanted to have another child within two years.



### 6.2 Ideal Family Size

In order to gain insight into fertility preferences among Indonesian women, all ever-married women were asked a hypothetical question about the number of children they would choose to have if they could start their reproductive years again. Those who gave a non-numeric answer (22 percent in 1994) were not prompted to give an exact number.

Figure 6.2 presents the mean ideal number of children for ever-married women according to the region of residence. The data indicate that women throughout the country reported wanting fewer children in 1994 than they did in 1987. Overall, the desired family size declined from 3.2 children in 1987 to 2.9 children in 1994.



There are notable differences in ideal family size among regions (see Figure 6.2). Women in Java-Bali want fewer children than women in other regions—2.9, compared with 3.4 children. Due to a more rapid decline in the preferred number of children in Outer Java-Bali I compared with Outer Java-Bali II, the ideal number of children in 1994 was the same for both these regions (3.4 children).

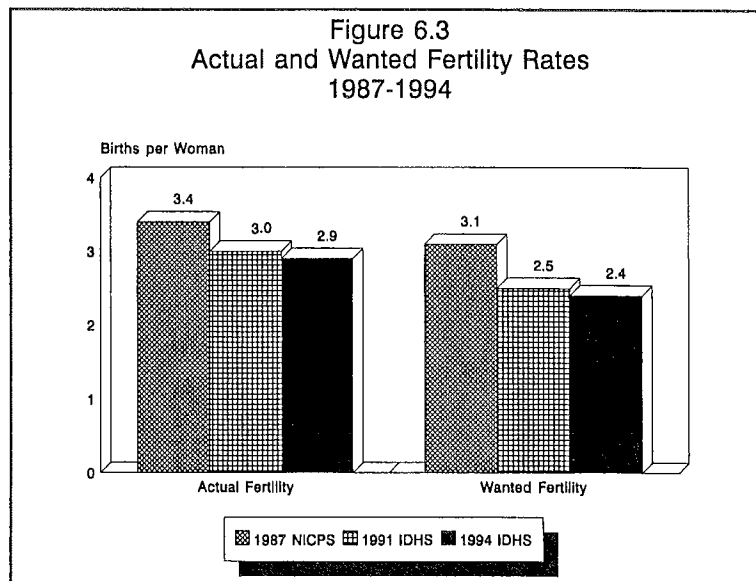
### 6.3 Wanted Fertility

In the Indonesia DHS surveys women were asked a series of questions about each child born in the preceding five years to determine whether the pregnancy was wanted then, wanted but at a later time, or unwanted. Figure 6.3 presents a comparison of actual fertility (the total fertility rate) and wanted fertility. *Wanted fertility* is calculated in the same manner as conventional age-specific fertility rates, except that the numerator includes only births classified as wanted. If



Indonesian women could achieve their fertility desires, the fertility rate (wanted fertility) would be 2.4 children, half a child less than the actual fertility rate.

Wanted fertility has decreased faster than actual fertility, widening the gap between these rates from 0.3 children in 1987 to 0.5 children in 1994 (see Figure 6.3).

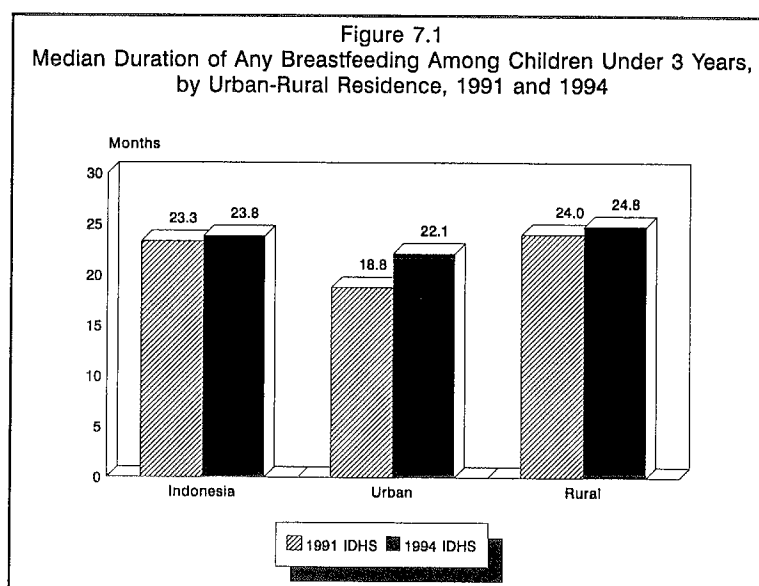


## 7 Breastfeeding and Infant Feeding

### 7.1 Breastfeeding

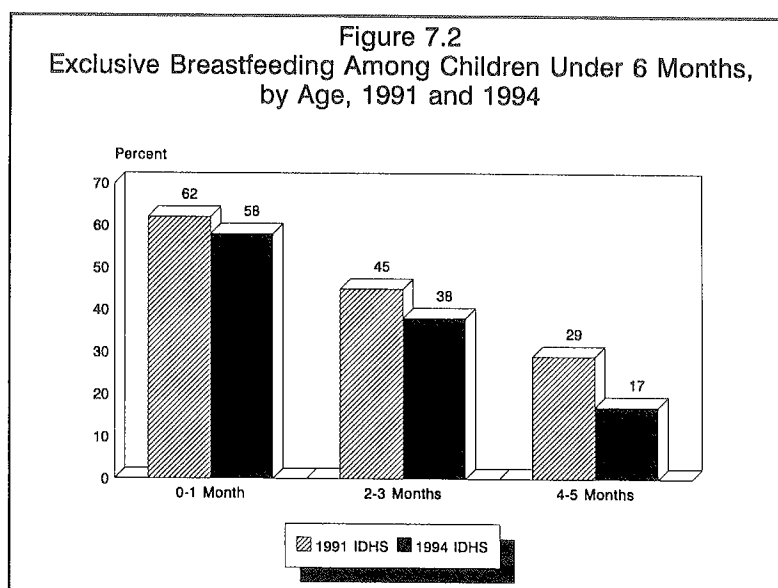
Breastfeeding plays a major role in the health and survival of infants. In Indonesia, almost all children (97 percent) are breastfed for some period of time.

Indonesian women have a tradition of breastfeeding for long durations. Data from the Indonesia DHS surveys indicate that Indonesian women breastfeed their children for almost two years—23.3 months in 1991 and 23.8 months in 1994. Infants in urban areas and those born to more educated women are generally breastfed for shorter durations (see Figure 7.1).



### 7.2 Exclusive Breastfeeding

In Indonesia, exclusive breastfeeding is recommended for infants under four months of age. However, data from the 1991 IDHS and 1994 IDHS indicate that supplementation is being introduced at an increasingly early age. For example, in 1991, 62 percent of infants under two months of age were exclusively breastfed, compared with 58 percent in 1994. The same pattern is observed for older infants (see Figure 7.2).





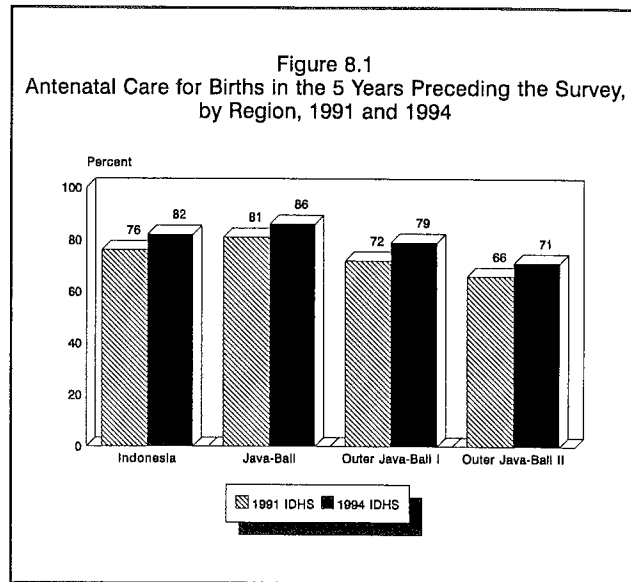
## 8 Maternal Care

Comparable information on antenatal care, tetanus toxoid injections and delivery assistance is available only from the 1991 and 1994 Indonesia DHS surveys. Although the period only spans three years, there are indications that improvements have been made in the provision of health services to pregnant women.

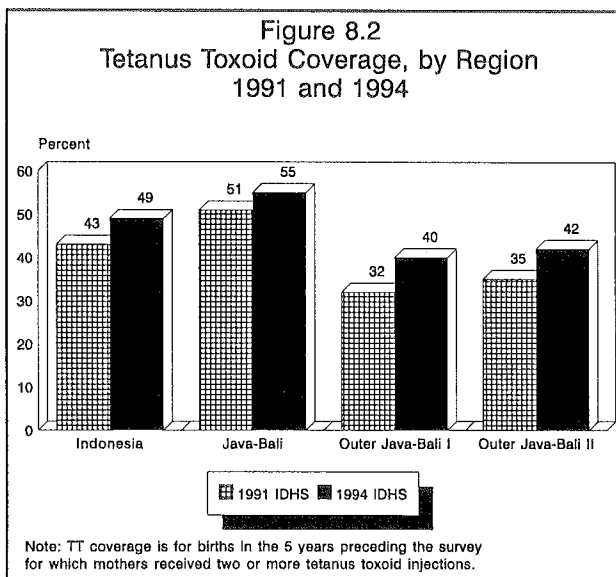
### 8.1 Antenatal Care

The Government of Indonesia defines antenatal care as pregnancy-related health care provided by a medical professional (doctor, nurse or midwife). Therefore, antenatal care received from traditional birth attendants, friends, etc. is not included in this discussion.

Over the years, an increasing proportion of women have used antenatal care services. In 1994, 8 in 10 births in the five years preceding the survey were to mothers who received antenatal care. Among these births, 72 percent were examined by a nurse or midwife or an auxiliary nurse or midwife, and 11 percent by a doctor (data not shown).



There are significant differences in antenatal care coverage by region. Women living in the Java-Bali region are more likely to have received antenatal care than women in other regions, however, there is evidence that the differences have narrowed in recent years (see Figure 8.1).



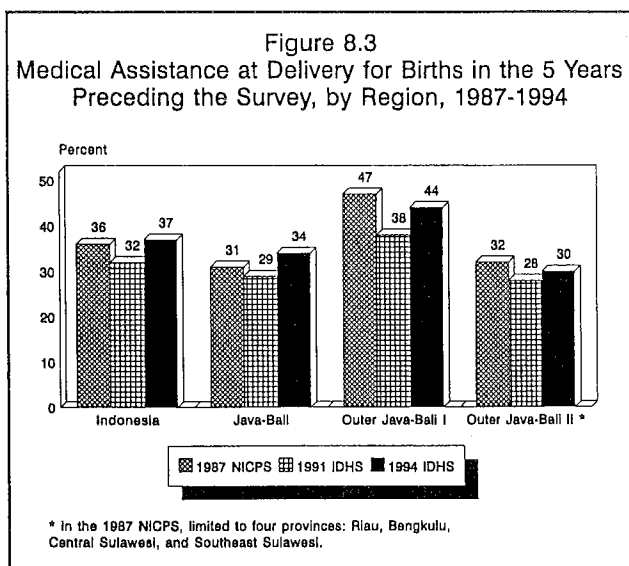
### 8.2 Tetanus Toxoid Injections

Immunization of pregnant women is a coordinated activity of the Expanded Program on Immunization and the maternal and child health care units of the Ministry of Health, which recommends that women receive two tetanus toxoid (TT) injections during the first pregnancy. In recent years, TT immunization has also been given to women before marriage, so that any pregnancy within three years of the wedding would be protected against tetanus.

Coverage of tetanus toxoid vaccine has increased, reflecting the increase in the use of antenatal care services. In 1994, 49 percent of

births in the five years preceding the survey were to mothers who received two or more doses of TT vaccine, compared with 43 percent in 1991 (see Figure 8.2).

The increase occurred in all regions; however, children in Java-Bali are more likely to be protected against tetanus than children in other regions—55 percent in Java-Bali, compared with 40 to 42 percent in the Outer Java-Bali regions.



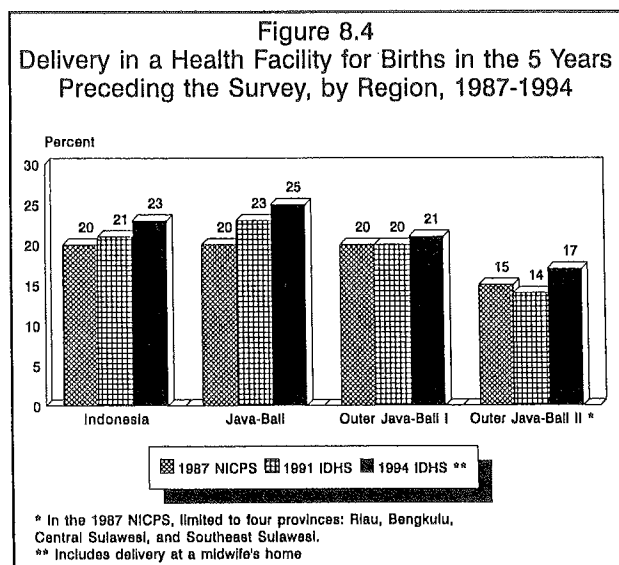
### 8.3 Delivery Assistance

Less than 4 in 10 births were assisted by a doctor or midwife, and the situation has remained about the same since 1987 (see Figure 8.3).

Births in Outer Java-Bali I are more likely than those in other regions to be assisted by a medical professional—44 percent, compared with 34 percent in Java-Bali and 30 percent in Outer Java-Bali II.

### 8.4 Place of Delivery

A large proportion of births in Indonesia occur at home, and the situation has not changed significantly since 1987 (see Figure 8.4). Delivery in a health facility occurs slightly less frequently in the Outer Java-Bali regions than in Java-Bali—25 percent in Java-Bali, compared with 21 percent in Outer Java-Bali I and 17 percent in Outer Java-Bali II.

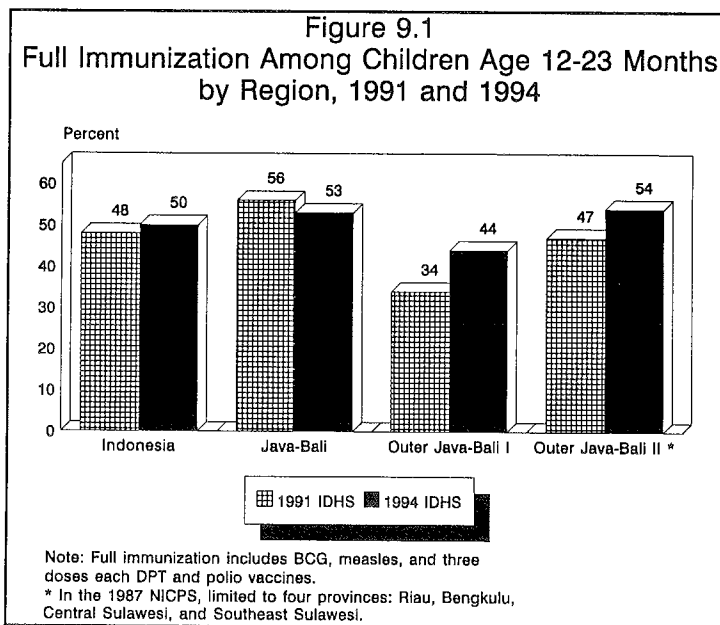


## 9 Child Care and Childhood Diseases

### 9.1 Immunization

The Expanded Program on Immunization, launched by the Indonesian Ministry of Health in 1977, recommends that all children receive immunization against six diseases: tuberculosis, diphtheria, pertussis, polio, tetanus, and measles.

In the 1991 and 1994 IDHS, immunization information was collected for children born in the five years before the survey. Immunization coverage is based on information recorded on health cards and information from mothers' reports. Based on both sources, the proportion of children 12 to 23 months who are fully vaccinated against these six childhood diseases has increased from 48 percent in 1991 to 50 percent in 1994 (see Figure 9.1). During the same time, the percentage of children whose mothers could show their health cards increased from 35 percent in 1991 to 39 percent in 1994 (data not shown).



As in the case of antenatal care and delivery assistance, children in Java-Bali are more likely than children in other regions to be fully immunized (i.e., received BCG, measles, and three doses each of DPT and polio vaccines). Data from the 1991 and 1994 IDHS suggest that there has been a slight decline in immunization coverage in Java-Bali. On the other hand, large gains are observed for the Outer Java-Bali regions.

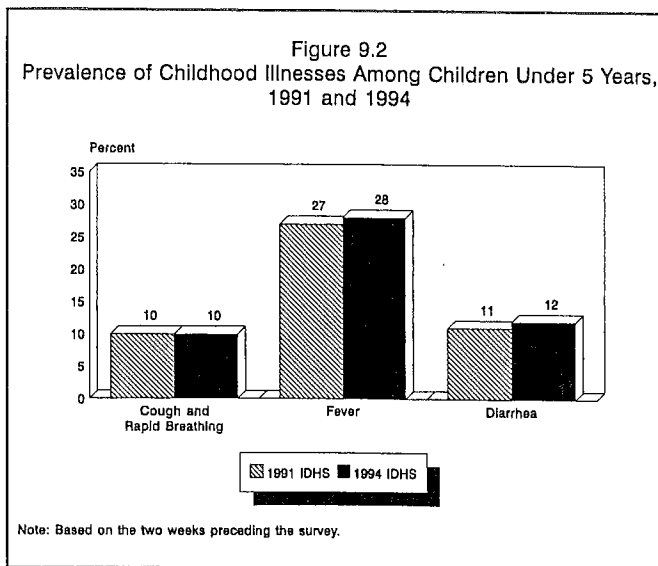
### 9.2 Prevalence of Acute Respiratory Infection, Fever and Diarrhea

Acute lower respiratory tract infection (ARI), primarily pneumonia, is a common cause of illness and death among children under age five. Pneumonia is characterized by cough with difficult or rapid breathing and chest indrawing. In this survey, ARI prevalence among children is measured by the mother's perceptions of the respiratory symptoms suffered by her child.

The 1994 Indonesia DHS indicates that 10 percent of children under five were reported to have been sick with cough and rapid breathing in the two weeks preceding the survey. The same level of illness was reported in the 1991 Indonesia DHS (see Figure 9.2).

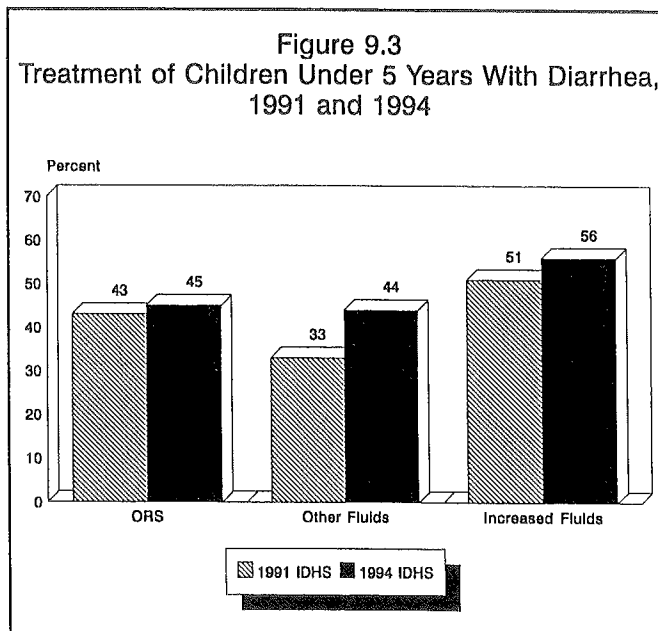
Various infectious diseases are accompanied by fever. In Indonesia, the most common diseases with fever are malaria, respiratory and intestinal infections, measles and typhoid. The 1991 and 1994 Indonesia DHS data indicated that 28 percent of children under five had fever in the two weeks prior to the survey (see Figure 9.2). Urban children and children in Java-Bali are more likely to have had fever than other children (data not shown).

Diarrheal disease continues to be a public health problem in Indonesia. To control this disease, a special program has been instituted by the government, which includes improving health services, training of health professionals, and promotion of oral rehydration therapy (ORT). The two-week prevalence of diarrhea is 12 percent (see Figure 9.2).



### 9.3 Treatment of Diarrhea

The recommended treatment for diarrhea is oral rehydration therapy, including solution prepared from packets of oral rehydration salts (ORS)—known locally by the name *Oralit*—and increased fluids. Although 9 in 10 mothers whose children had diarrhea reported that they had heard of or seen the *Oralit* packets, in practice only 45 percent of children with diarrhea were actually treated with ORS (see Figure 9.3). Treatment of diarrhea has improved over time with more children being treated with ORS, other fluids, and increased fluids in 1994 than 1991.



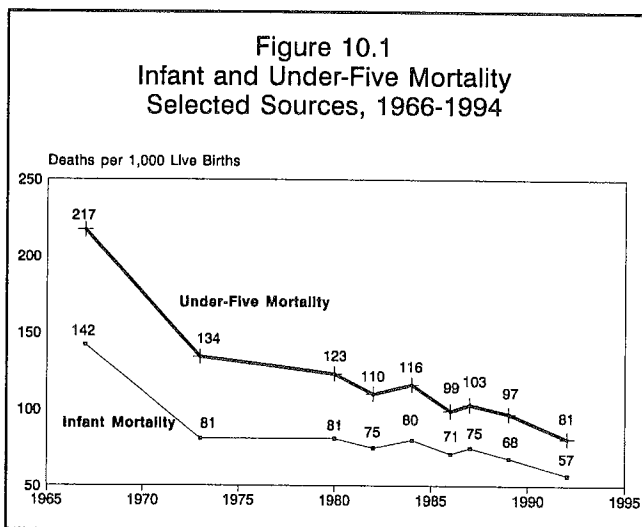
## 10 Infant and Child Mortality

### 10.1 Infant and Child Mortality Rates

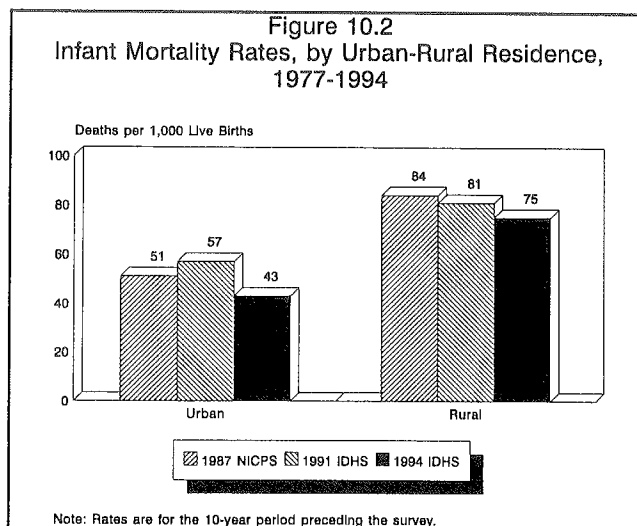
Trends in infant and child mortality can be studied using estimates based on population censuses and demographic surveys as well as retrospective data from a single survey. Infant and child mortality rates based on census data are estimated indirectly using information on the number of children ever born and the number of children who died, while estimates from the Indonesia DHS surveys are obtained from birth history data. As with fertility, these estimates are not strictly comparable, but they are useful for showing trends in infant and child mortality in the recent past.

Unlike the DHS surveys, estimates of infant and child mortality from census data are not published according to the social and economic characteristics of children. Thus, trends in infant and child mortality by background characteristics can only be examined using data from the three DHS surveys (1987 NICPS, 1991 IDHS, and 1994 IDHS). These rates, presented in Figures 10.2 to 10.5, are based on births in the ten-year period preceding each of the three surveys (1977-87, 1981-91, and 1984-94).

In 24 years, infant mortality has declined by 60 percent, from 142 deaths per 1,000 live births in the period 1966-71 to 57 per 1,000 in the period 1989-94. At the same time, mortality among children under five years declined by 63 percent from 217 deaths per 1,000 live births in the period 1966-71 to 81 per 1,000 in the period 1989-94 (see Figure 10.1).



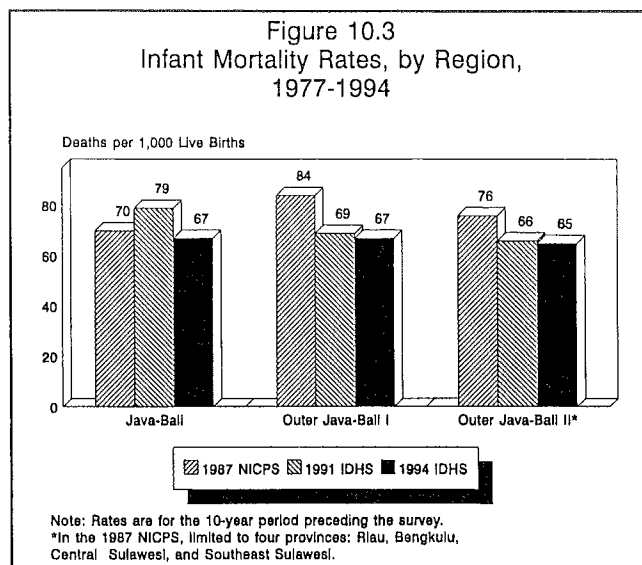
### 10.2 Infant Mortality Rates by Selected Characteristics



Children born to women living in urban areas have lower mortality than those born to women in rural areas—43 deaths per 1,000 live births, compared with 75 per 1,000 (see Figure 10.2). This pattern is found for all ages at death and in all regions. Lower mortality rates in the urban areas may be related to greater availability of health facilities.

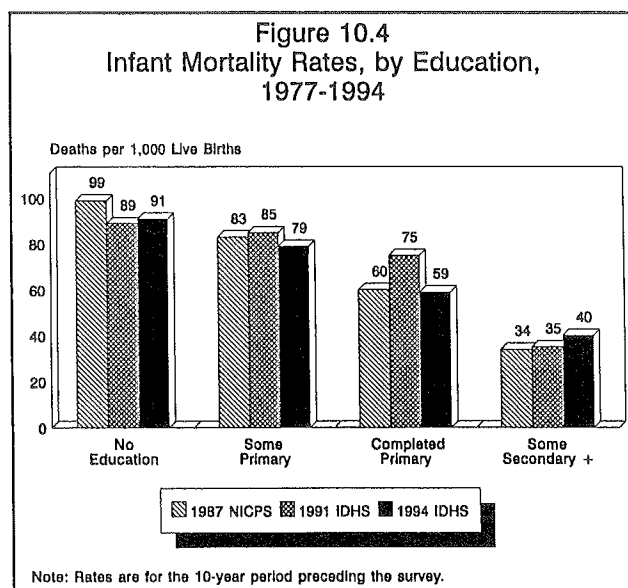
In a country as large and geographically dispersed as Indonesia, considerable variation in mortality among regions can be expected. Although there were significant differences in infant mortality among regions in the periods





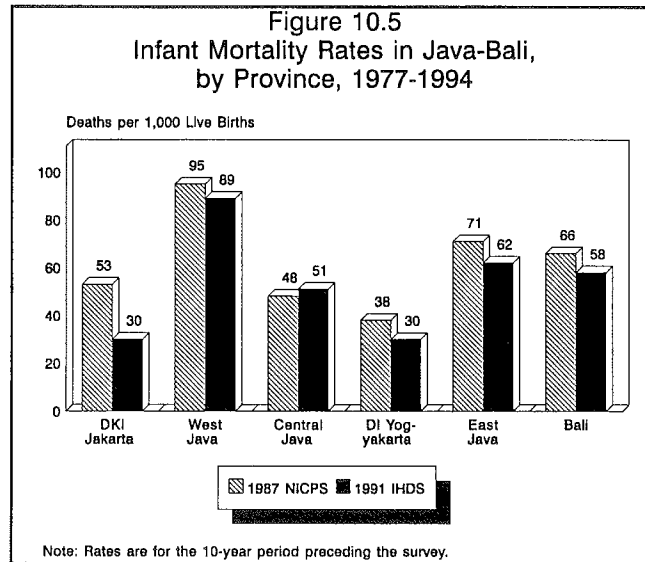
1977-87 and 1981-91, these differences have largely disappeared in the most recent period (1984-94). The Outer Java-Bali I region made considerable progress in reducing infant mortality to reach the same level as that of the rest of the country (see Figure 10.3).

Mother's level of education is closely associated with rates of childhood mortality. Data from the Indonesia DHS surveys indicate that mother's educational attainment is inversely related to childhood mortality levels; children of less educated women generally have less chance of surviving than those born to educated mothers. For example, children of mothers who have no education are more than twice as likely to die before their first birthday as children of mothers with some secondary education. This pattern has been observed in all three DHS surveys in Indonesia (see Figure 10.4).



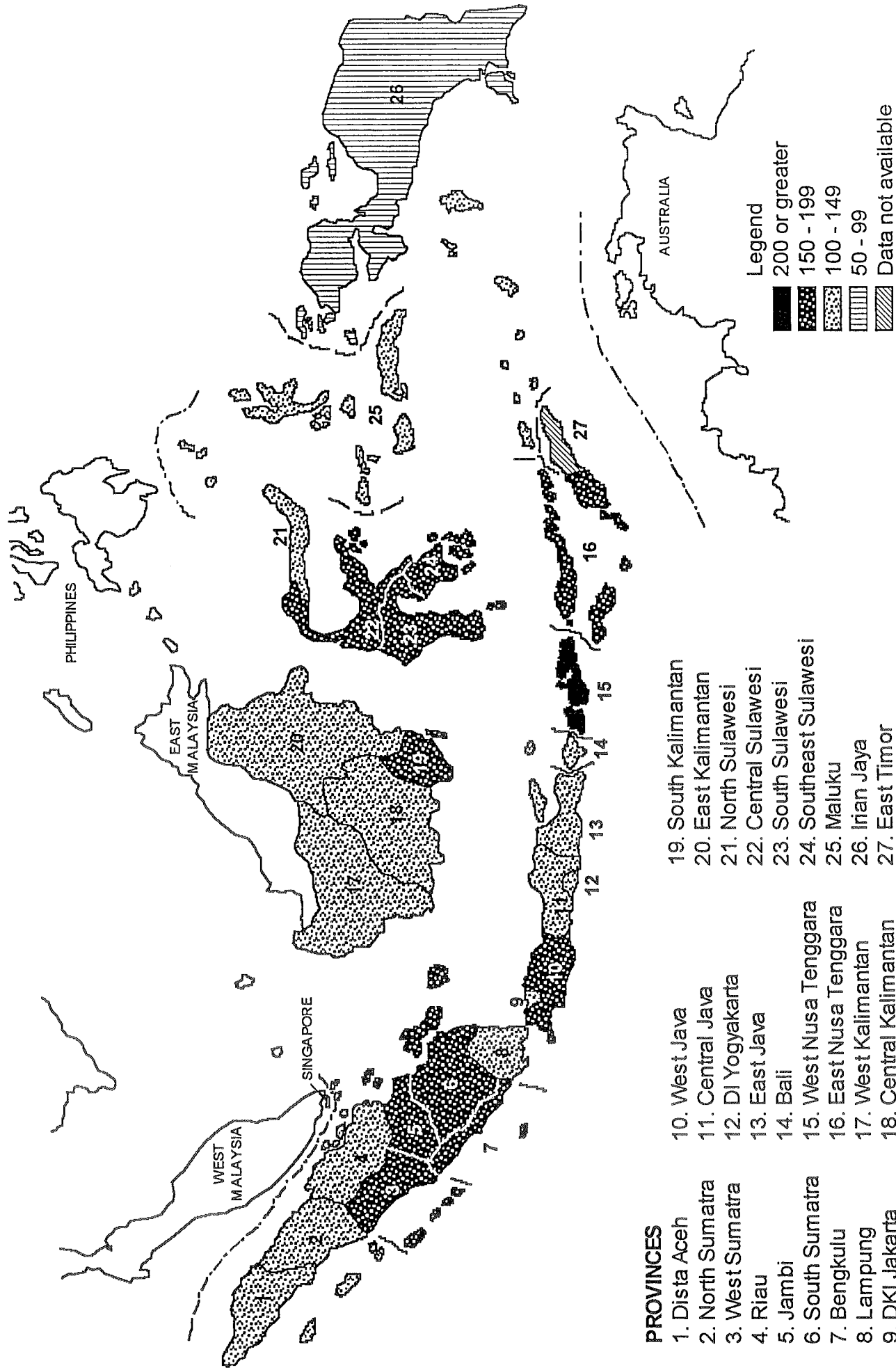
### 10.3 Infant Mortality Rates in Java-Bali by Province

There are significant variations in infant mortality rates among the six provinces of Java-Bali. DKI Jakarta, the capital, and DI Yogyakarta consistently have the lowest levels of infant mortality—30 deaths per 1,000 live births in the period 1984-94. In the early 1970s, Bali had the highest infant mortality rate, 110 deaths per 1,000 live births, followed by West Java (data not shown). Estimates for the period 1984-94 indicate that West Java continues to have a high infant mortality rate (89 per 1,000), while the rate in Bali has dropped to 58 per 1,000 (see Figure 10.5).

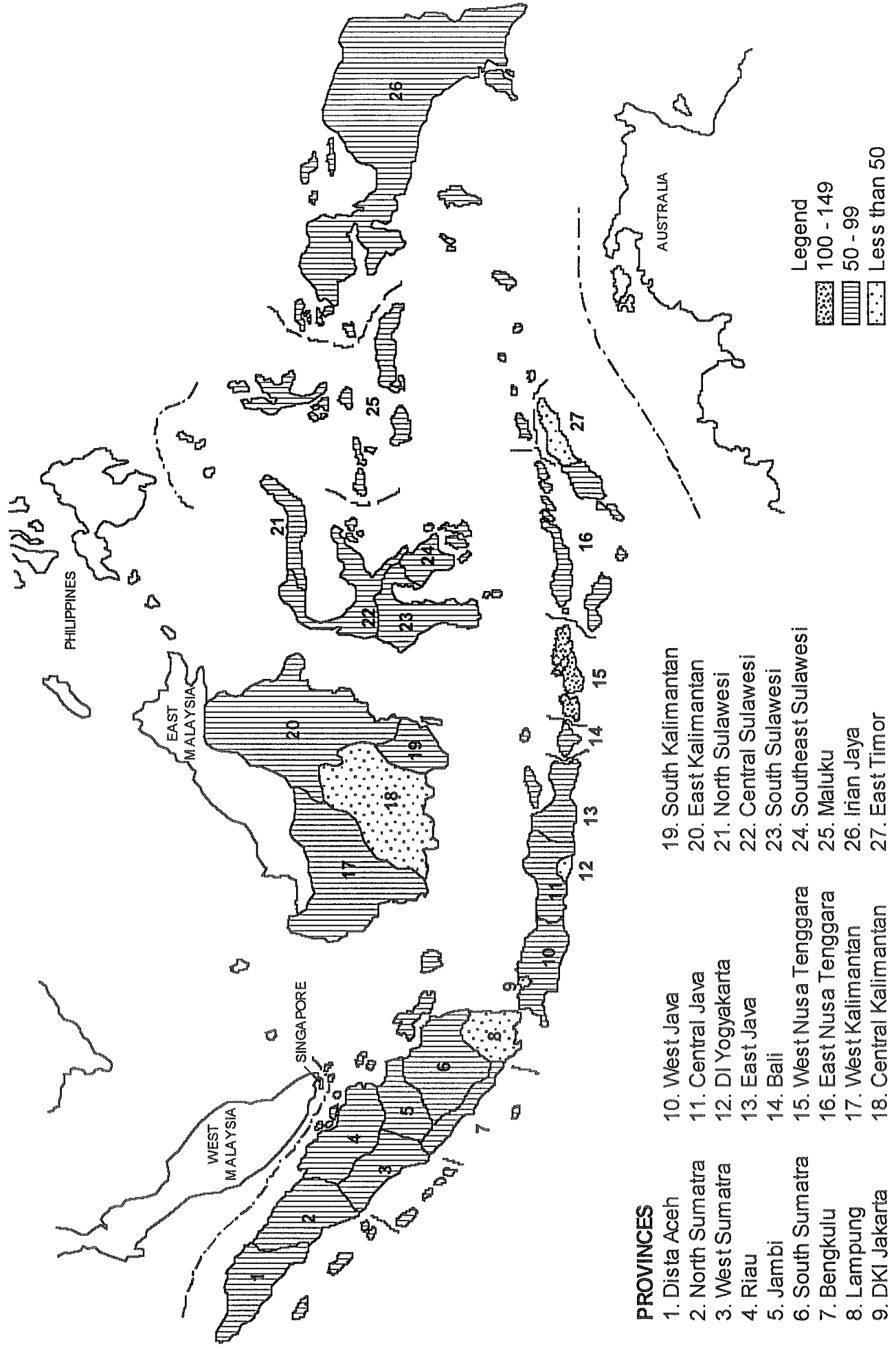


Figures 10.6 and 10.7 are maps of Indonesia showing infant mortality rates (IMR) by province for two periods: 1966-71 (based on the 1971 census) and 1984-94 (derived from the 1994 IDHS). The maps indicate that in just two decades, infant mortality in Indonesia has undergone a significant decline. In the late 1960s, the IMR was 100 deaths per 1,000 or higher in all but one province, and 150 deaths per 1,000 or higher in 11 provinces. The highest IMR was in West Nusa Tenggara—221 deaths per 1,000 live births (see Figure 10.6). In the late 1980s, the IMR had declined to less than 100 deaths per 1,000, in all but one province, while the IMR in West Nusa Tenggara remained high at 110 deaths per 1,000 (see Figure 10.7). Some provinces—DKI Jakarta, DI Yogyakarta, Lampung, East Timor and Central Kalimantan—have an IMR of less than 50.

### 10.6 Infant Mortality Rates by Province, 1966-1971



### 10.7 Infant Mortality Rates by Province, 1984-1994





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