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# Republic of Panama
# General Comptrollership of the Republic
# Direction of Statistical and Census

**PROFILES OF THE CHANGES IN THE LEVELS OF MORTALITY IN THE REPUBLIC OF PANAMA, FOR PROVINCE AND INDIGENOUS DISTRICTS AND SOME CONSIDERATIONS RELATED TO POVERTY AND HEALTH, PERIOD 1990-2000.**

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## I. Description of the Panamanian Population.

The Republic of Panama it is located in a narrow Isthmus in the south part  of Central America, between Costa Rica and Colombia. The Caribbean Sea and the Pacific Ocean conform the limits north and south, respectively.

The total surface area of the Republic it is about 75,517 square kilometers, measuring about 650 square kilometers  long and about 50 square kilometers of wide in its more narrow part.

The Climate is nicely tropical, with uniform temperatures the whole year. The temperature in the cost generally stays between the 73 and 81 Fahrenheit degrees and the temperature in the high lands  is only some degrees minor. Panama has two season , the dry and the rainy one. The rainy station extends from April until December with an average  of a cloud burst per day.

## 1. The City of Panama

The city of Panama, capital  of the Republic, it is modern and cosmopolitan. With a population  of 446,574 inhabitants at the 1º of July  of 2005,  it has  highest demographic concentration.

In Panama 7 indigenous groups live. Together they represent 6% of the Panamanian population. These groups are the Ngöbe, Kuna, Embera, Bugle or Bokota, Wounaan, Nasos (Teribes or Tlorios) and those Bri-Bri. According to the population census  of the 2000, the indigenous populations are composed  in the following way:

Indigenous Group
Population Percentage of the total  indigenous population

| | | |
|---|---|---|
| Western  Region | 193.680 | 67,90 |
| Ngöbe | 169,130 | 59,3 |
| Bugle | 17,731 | 6,2 |
| Naso / Teribe | 3,305 | 1,2 |
| Bri-bri | 2,521 | 0,9 |
| Bokotas | 993 | 0,3 |
| Oriental region | 91.551 | 32,10 |
| Kuna | 61,707 | 21,6 |
| Embera | 22,485 | 7,9 |
| Wounaan | 6,882 | 2,4 |
| Unidentified | 477 | 0,2 |

As  appears in the previous chart and in the lower section the embera and wounaan  represent a small percentage  of the total population.
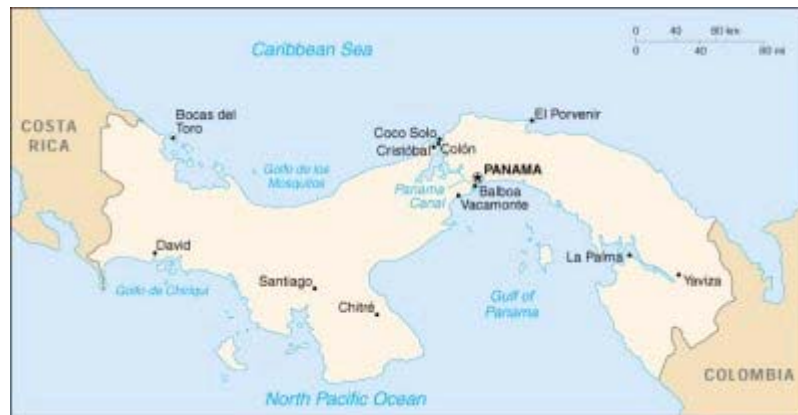
## 2. Life conditions of the natives in Panama

There is a large problems of poverty among the indigenous population. A report of the World Bank indicates that in 1997 it stops, 83% of the indigenous population lived under the line of poverty. The report doesn't only consider the economic conditions, but also another series of factors in its evaluation of the poverty. The conditions are among these factors of housing, access to basic services, access to bank money, it appraises from birth and the size of the family.

Most of the Panamanians are proud of the indigenous population and their history, languages and forms of life. Their traditional dances are shown with enthusiasm when promoting Panama as a tourist destination. But on the other hand, there are many situations in which the natives are excluded. This is the case, for example, in the labor sector, where often they are discriminated.

## 3. Relationship among the indigenous populations

The indigenous groups live in different parts of Panama and in the last years they have maintained good relation with each other. In the Darien they existed in the past problems between the kunas and the embera and wounaan. The local tally of Nepenthes in Panama, Dobbo Yala is integrated mainly by kunas and it is the only indigenist organization that works with other indigenous groups that own one. In general, there are good relationships among the personnel of Dobbo Yala and the embera and wounaan. This, among other things, help Dobbo Yala to be involve in the advice of local embera and wounaan in the decisions.

<u>Embera and wounaan</u>

These groups, before we knew as Choco, that is the name of a region in Colombia, they live together, but they are perceived as different. They have different languages, for what is very common to listen three languages in the meetings - the two indigenous and the Spanish language. Most don't speak Spanish, but they live together in the same communities. At the present time conflicts don't exist among these two groups.

They live in areas, where they have already lived per centuries. However, the existent data on their migratory pattern are very bad, for what rumors exist of that these groups came from Colombia and that slowly they were colonizing the region. These rumors arise because new communities Embera and Wounaan have settled down in the region. But these natives come from the same regions to form communities where they live together - before they lived separate, along the rivers.

They are great social problems between the embera and wounaan. According agreement to a report of the World Bank of 1997, 80% lives under the line of poverty and 25% they are illiterate. On the average, the boys only go to the school 5 years and the girls 4 years.

The poorest natives are those that live in the cities. In particular the embera and wounaan that live in the cities are very poor. This is due to that are very not well organized. The population Kuna lives quite better, because they have created there own communities kuna inside the City of Panama and of this way they maintain many of its casual contacts.

## II. Sex and Age of the Population Structures of the Republic of Panama for Province and Indigenous district: Period 1990–2000.

The analysis of the resulting figures of the estimates and projections of the population of Province, indicate that the composition by sex and age of the population presents significant differences, as it is distributed in the political and administrative divisions in the Republic. The same is caused by changes in the social and economic environment take place in differentiated form, that originates different degrees of internal development in the country. These variations in the development induce the demographic behavior of variables be s equally dissimilar in the provinces.

The population in the Ngöbe Bugle District, presents the highest natural growth rate in the Republic whose natural increase of 33 births for a thousand inhabitants average yearly in the five year period 2000-2005, is a result of a rate of fertility of 39 births for a thousand inhabitants and a rate of mortality estimated in 6 deaths by a thousand inhabitants, in the same five year period.

Similar characteristic presents the Embera District. Not withstanding, this district experiences the lowest global rate of growth in the Republic. This is due to fact that the same one is a region of expulsion of population, since their natural growth is of 28 births for a thousand people in the five year period 2000-2005, the geometric growth is calculated in 6.0 by a thousand inhabitants.

The Province of Bocas del Toro presents a similar natural growth to the mentioned districts, with the variant that in this Province the rate of mortality it is lower, with a tendency to the stabilization and it is expected to reach its lower level of 28.8 by a thousand people in the five year period 2000-2005, to stops later to experience small increases, resulting of a structure of a more older age.

The group of mentioned population, they are also characterized, to have a young population whose medium age was inferior to 18 years in the year 2000. This originates, consequently that the dependence relationship it is high, because a bigger volume exists of population smaller than fifteen years that depends on the population of 15 to 64 years of age. For the specific case of the mentioned districts, the relative weight of the smallest population of 15 years is a bit superior to 50 percent, as long as the weight of those potentially actives it was approximately 48 percent in the year 2000.

The Province of Darien and the District of Kuna Yala have inferior natural growths compared to the three analyzed divisions. For the five year period 2000-2005 their respective rate are of 24 and 22 for a thousand inhabitants and their medium ages were of 19 and 20 years, in the same order. The structure by sex and age, reveals a young population , with features of selective migration by sex and in certain groups of age.

In another context, it is observed those province with similar demographic characteristic indicate that their population is in the beginnings the fourth stage she of the demographic transition. The Province of Los Santos it is the one that presents the lowest natural growth in the country, with a relatively aged population and a high medium age. In the year 2000 the medium age was considered in 31 years and is projected that the same one will increase to 35 years in the year 2005. The percentage distribution of the population older than 65 years is of 10 percent in the year 2000 and 11 percent in the year 2005.

Similar characteristic similar presents the Province of Herrera, being the second more aged Province, together with the Province of Los Santos, it will reach a first a negative growth rate of population . It is expected that in the five year period 2000-2005 both have a growth of 0.66 and 0.49 respectively for each 100 inhabitants, with tendency to continue diminishing. Also, it will increase in relative weight of the elder mature population and it will diminish the proportion of those under 15 years, having the adult mature population a higher growth.

The Provinces of Chiriqui and Panama, present values of similar population growth to the national average whose medium ages were of 25 and 26 years, respectively and its structure of age is mature, that tends to be aging. The social conditions average of both Provinces favor them so that the same ones have demographic indicators of more advanced regions; however, the presence near indigenous areas the Province of Chiriqui and attraction of population of other domestic areas toward the Province Panama who carries there customs or levels of under education, they will influence the demographic indicators.

When analyzing the relative weight of the population of 15 to 64 years, as a positive determinant to acquire a higher development in the country, because is this population that contributes with the manpower to achieve development.

It is observed that the Provinces of Panama, Los Santos and Herrera, they are those that present the best conditions to improve their development, being the percentage of their r population over 60 percent. Never the less, this demographic voucher should be accompanied with the development of the economic and educational sector, and, what t could be an advantage could become a negative factor and that will create a social crisis in these Provinces.

The District of  Kuna Yala is the region that presents the lowest index  masculinity, that indicates the a prevalence of women.

The Province of Panama and the District Ngöbe Bugle equally  have a bigger number  of women, and  masculinity index below 100 men for each 100 women.

**III. Level and tendencies of the mortality in the Republic  of Panama for Province and Indigenous District: period 1990-200**
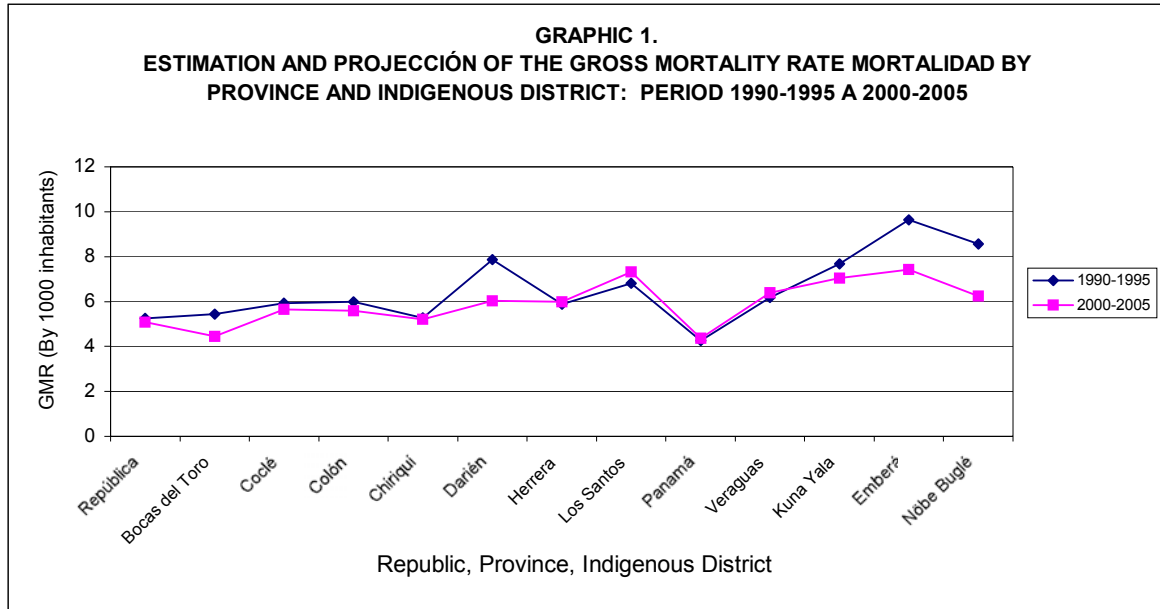
The mortality is a demographic variable whose effects determine significant changes in the structure by sex and age of the population. This variable is important in the elaboration  of indicators that contribute to determine the level  of health and domestic social development. Starting from the decade  of 1950, it is observed in the Republic  of Panama an improvement in the level  of health  of the population, what is achieved by means of the integration of the heath systems, the creation  of the social security as well as, the development of programs of vectorial control, among other; that have contributed to reduce the levels  of mortality.

Our analysis is centered in the period 1990-2005 with the purpose  to evaluate the recent situation  of the mortality in the Republic of Panama, The analysis  of the mortality through the gross rate  of mortality  allows us to know the magnitude  of the deaths for Province and district expressed by each thousand people. In such a form, that we can classify to the Provinces  of Darien, Herrera, Los Santos and Veraguas as Provinces of high mortality, in relation to the rest  of the Provinces, with  gross mortality rate of mortality that oscillate among 7.9 deaths to 7.3 deaths for each a thousand inhabitants during the period 1990-2005.

Of these, the Province of Los Santos  reveals the biggest number  of cases for each a thousand inhabitants with rate that varied  from 6.8 for each thousand inhabitants at the beginning  of the projection 1990-1995, until reaching 7.3 for each a thousand inhabitants in the five year period 2000-2005. What caused in great measure by the aged structure that experiences these Provinces.

The second group of Provinces they can be characterized like of intermediates  mortality; among these they are the Provinces  of Cocle, Colon and Chiriqui, with gross mortality rate

that oscillate between 6.0 and 5.20 deaths for to thousand inhabitants during the period 1990-2005, it stands out the Province Chiriqui that increases in sustained form its gross rate of mortality  of 5.3 per thousand inhabitants during the five year period 1990-1995 to 5.21 for a thousand inhabitants in the five year period 2000 - 2005.

**GRAPHIC 1.**
**ESTIMATION AND PROJECCIÓN OF THE GROSS MORTALITY RATE MORTALIDAD BY PROVINCE AND INDIGENOUS DISTRICT:  PERIOD 1990-1995 A 2000-2005**



The third group integrated by the Provinces of Panama and Bocas del Toro experience lower gross mortality rates  during the whole period  of study. Although, their gross mortality rate was centered around 5.4 by thousand at 4.3 in the period 1990-2005.

On the other hand, the analysis of the level of mortality indicates that  the districts of Kuna Yala and Emberá maintain the highest levels of deaths for each a thousand inhabitants during the period 1990-2005; however, the rhythm of descent in the levels  of mortality  varies among these districts.

The District Kuna Yala reveals a descent sustained in the level  of the mortality when changing  from 7.7 deaths by each a thousand people at the  beginning  of the projection 1990-1995, to 7.0 deaths for a thousand people in the five year period 2000-2005.

The District Embera descends its magnitude more quickly, when changing  of 9.6 deaths for thousand at  the beginning  of the projection to 7.4 during the five year period 2000-2005.

The District Ngöbe Bugle is the one that will experience the biggest descent, which will reduce its rate of mortality almost in half when concluding the projection; when changing its gross rate  of mortality  from  8.6 deaths per thousand people during the five year period 1990-1995 to 6.3 deaths for a thousand inhabitants in the five year period 2000-2005.

## 1.  Infantile mortality



**Graphic 2.**
**ESTIMATION AND  PROYECTION OF THE INFANT MORTALITY RATE BY PROVINCES PROVINCIA: PERIOD 1990-1995 A 2000-2005**
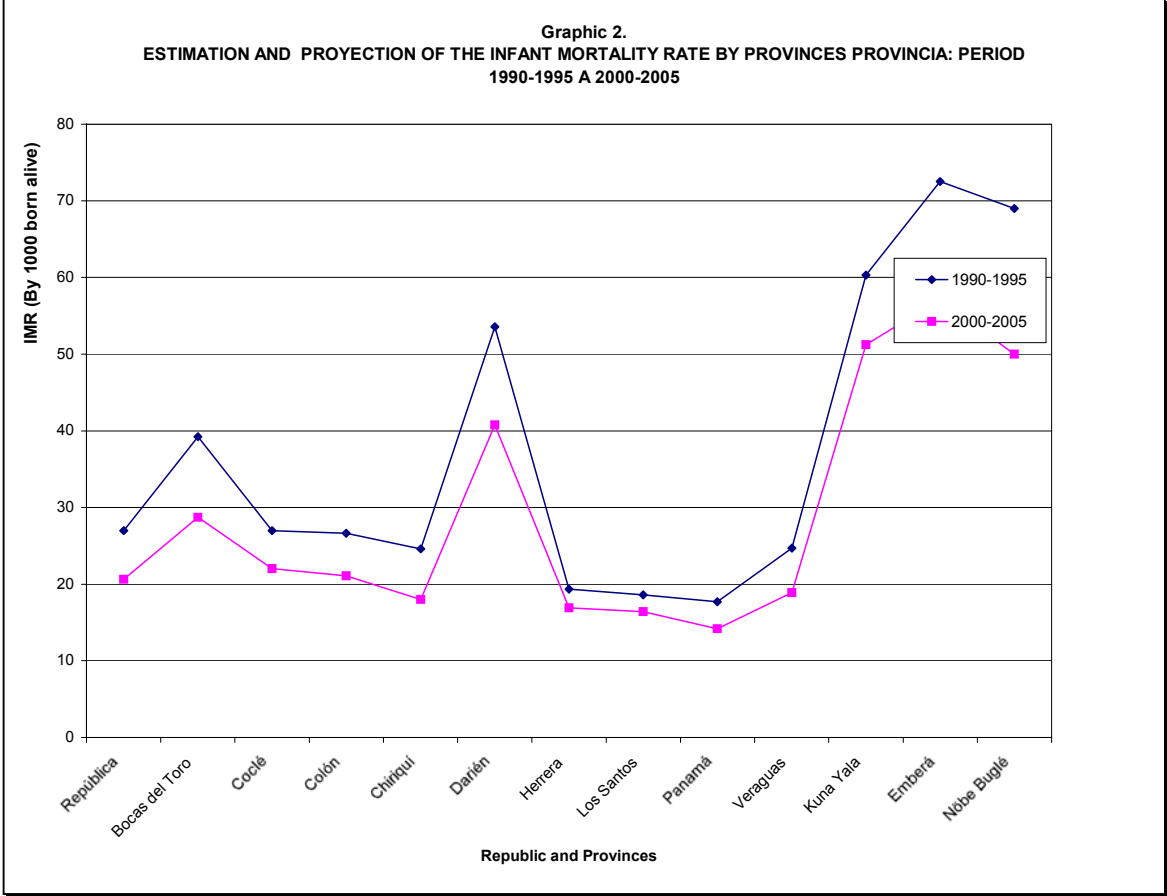
Another important indicator for the determination of the situation, attendance and access to services  of health, constitutes the infantile mortality, expressed through the rate  of infantile mortality per thousand born alive ($1q0$, probability  to die  of those smaller than 1 year). This indicator reveals the infantile deaths in connection with each thousand born alive.

In the Republic  of Panama, the highest levels of infantile mortality  concentrates in Provinces with high geographical dispersion and rural areas. Such is the case  of the Provinces  of Bocas del Toro and Darien whose rate of infantile mortality  reached 39 and 54 infantile deaths for each thousand born alive, respectively, at the beginning  of the projection, five year period 1990-1995; then tends to descend respectively to 29 and 41 infantile deaths, during the five year period 2000-2005.

The rate of lower infantile mortality  is centered in the Province  of Panama, attributable to its urban characteristic that allows a bigger accessibility to the services and programs  of health that  favor lower registrations in infantile deaths. The rate of infantile mortality  descends almost of 18 deaths for thousand born alive in the five year period 1990-1995 to 14 deaths for thousand born alive in the five year period 2000-2005.

The analysis of the level of infantile mortality  of the indigenous districts,  reveals a high mortality during the whole period  of study, with rate  of mortality that  oscillate between 73 and 50 infantile deaths per thousand born alive. It is worth to say that the highest levels in the incidence of these infantile deaths are register in the District of Embera that changed from 72 infantile deaths during the five year period 1990-1995 to 57.2 deaths per thousand born during the five year period 2000-2005.

## 2.  Life Expectancy at birth.



GRAPHIC 3.
ESTIMATION AND PROJETION OF LIFE EXPECTANCY AT BIRTH BY PROVINCE: PERIOD 1990-95 A 2000-2005
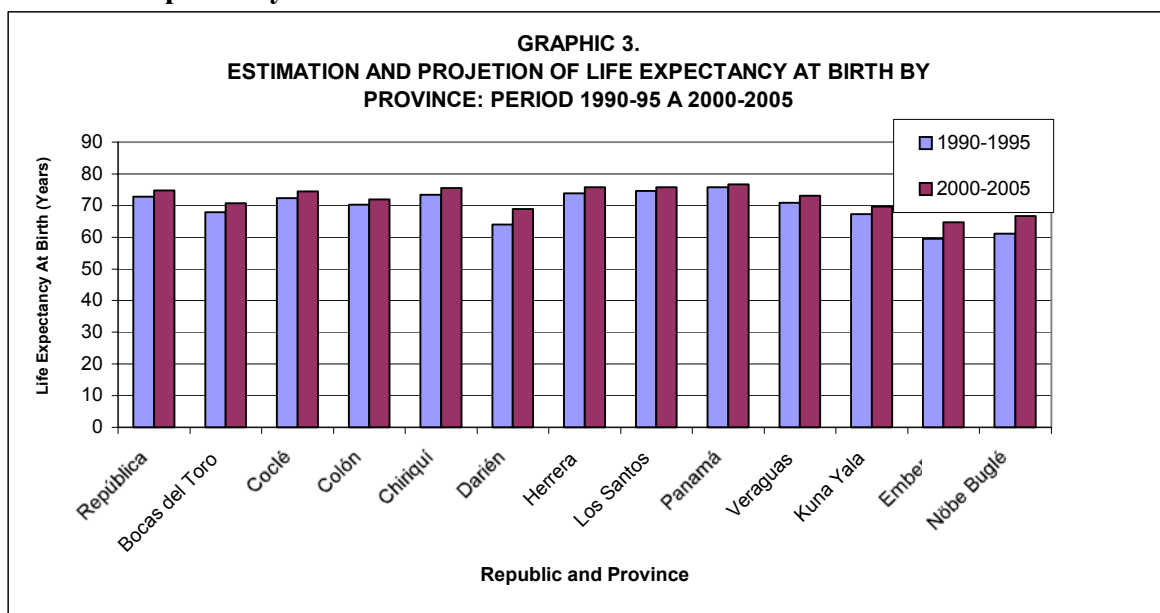
The Life expectancy  constitutes an excellent indicator in the determination  of the level  of health  of a specific population, since it identifies the average years that a person could live from her birth until the end of life, if the observed mortality prevail from its birth. The analysis of this indicator for Province  reveals a direct proportion among the degree  of dispersion, development and rural area, what is translated in the following: more development, higher the level of Life expectancy when being born, as well as the rest of the

structure of the population. Other factors that impact is this tendency, Is the registry covering of infantile maternal health, the campaigns of vaccination and vectorial control that they can make this supposition to vary.

However, the Province of Panama shows the highest Life expectancy when at birth, which varies of around 73 years in the five year period 1990-1995 and it spreads to the increment until reaching 74 years in the period 2000-2005.

The lower Life Expectancy is observed in the Province of Darien with a valor of 62 years during the five year period 1990-1995, reaching an estimate of 67 years during the five year period 2000-2005.

DEMOGRAPHIC INDICATORS OBTAINED FROM THE   ESTIMATION AND PROJECTION OF THE POPULATION.
BY PROVINCE AND IDIGENOUS COUNTRY:  PERIOD 1990-2005

| Period | Republic | PROVINCE | | | | | | | | | Indigenous Districs | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Bocas del Toro | Coclé | Colón | Chiriquí | Darién | Herrera | Los Santos | Panamá | Veraguas | Kuna Yala | Emberá | Ngöbe Buglé |
| **Total Population** | | | | | | | | | | | | | |
| 1990 | 2,410,916 | 72,603 | 179,673 | 175,127 | 333,785 | 37,730 | 97,791 | 79,768 | 1,100,161 | 203,157 | 35,175 | 8,379 | 87,567 |
| 1995 | 2,670,413 | 82,737 | 195,381 | 193,132 | 357,634 | 39,973 | 102,644 | 83,564 | 1,259,128 | 211,012 | 35,446 | 8,774 | 100,988 |
| 2000 | 2,948,023 | 93,682 | 210,240 | 212,342 | 381,405 | 42,281 | 106,451 | 86,857 | 1,436,020 | 217,813 | 35,800 | 9,050 | 116,082 |
| 2005 | 3,228,186 | 105,521 | 224,278 | 231,425 | 404,914 | 44,198 | 110,013 | 89,007 | 1,617,130 | 223,337 | 36,670 | 9,317 | 132,376 |
| **Male Population** | | | | | | | | | | | | | |
| 1990 | 1,220,458 | 39,427 | 93,603 | 89,678 | 171,650 | 20,867 | 50,232 | 41,193 | 541,387 | 108,590 | 16,699 | 4,373 | 42,759 |
| 1995 | 1,349,150 | 44,079 | 101,416 | 98,580 | 183,112 | 22,010 | 52,380 | 42,901 | 622,118 | 111,861 | 16,724 | 4,597 | 49,372 |
| 2000 | 1,488,568 | 48,938 | 108,487 | 107,928 | 194,654 | 23,442 | 54,040 | 44,359 | 713,649 | 114,612 | 16,560 | 4,744 | 57,155 |
| 2005 | 1,628,720 | 54,293 | 115,785 | 117,317 | 205,803 | 24,376 | 55,820 | 45,242 | 805,592 | 117,674 | 17,097 | 4,832 | 64,889 |
| **Female population** | | | | | | | | | | | | | |
| 1990 | 1,190,458 | 33,176 | 86,070 | 85,449 | 162,135 | 16,863 | 47,559 | 38,575 | 558,774 | 94,567 | 18,476 | 4,006 | 44,808 |
| 1995 | 1,321,263 | 38,658 | 93,965 | 94,552 | 174,522 | 17,963 | 50,264 | 40,663 | 637,010 | 99,151 | 18,722 | 4,177 | 51,616 |
| 2000 | 1,459,455 | 44,744 | 101,753 | 104,414 | 186,751 | 18,839 | 52,411 | 42,498 | 722,371 | 103,201 | 19,240 | 4,306 | 58,927 |
| 2005 | 1,599,466 | 51,228 | 108,493 | 114,108 | 199,111 | 19,822 | 54,193 | 43,765 | 811,538 | 105,663 | 19,573 | 4,485 | 67,487 |
| **DEPENDENCY RATE (BY 1000 PERSON)** | | | | | | | | | | | | | |
| 1990 | 669.9 | 858.3 | 771.5 | 732.8 | 685.9 | 877.6 | 637.9 | 567.5 | 580.5 | 787.2 | 862.1 | 1,142.3 | 1,130.4 |
| 1995 | 625.8 | 847.8 | 714.5 | 679.1 | 636.7 | 852.5 | 600.6 | 556.4 | 543.9 | 702.3 | 874.9 | 1,080.6 | 1,094.7 |
| 2000 | 596.4 | 830.0 | 697.5 | 632.7 | 615.8 | 847.5 | 574.8 | 532.1 | 512.9 | 684.9 | 886.0 | 1,065.3 | 1,054.8 |
| 2005 | 569.5 | 782.8 | 667.2 | 595.4 | 591.1 | 794.8 | 554.7 | 513.7 | 492.5 | 658.2 | 877.3 | 997.2 | 977.1 |
| **MALE/FEMALE INDEX (BY 100 WOMEN)** | | | | | | | | | | | | | |
| 1990 | 102.5 | 118.8 | 108.8 | 104.9 | 105.9 | 123.7 | 105.6 | 106.8 | 96.9 | 114.8 | 90.4 | 109.2 | 95.4 |
| 1995 | 102.1 | 114.0 | 107.9 | 104.3 | 104.9 | 122.5 | 104.2 | 105.5 | 97.7 | 112.8 | 89.3 | 110.1 | 95.7 |
| 2000 | 102.0 | 109.4 | 106.6 | 103.4 | 104.2 | 124.4 | 103.1 | 104.4 | 98.8 | 111.1 | 86.1 | 110.2 | 97.0 |
| 2005 | 101.8 | 106.0 | 106.7 | 102.8 | 103.4 | 123.0 | 103.0 | 103.4 | 99.3 | 111.4 | 87.3 | 107.7 | 96.2 |
| **MEDIAN AGE (AGE)** | | | | | | | | | | | | | |
| 1990 | 21.8 | 17.7 | 20.6 | 20.6 | 21.6 | 18.1 | 23.7 | 26.8 | 23.3 | 20.2 | 19.1 | 14.8 | 14.6 |
| 1995 | 23.4 | 18.2 | 22.3 | 22.1 | 23.4 | 18.9 | 25.6 | 28.9 | 24.7 | 22.3 | 19.7 | 15.4 | 15.0 |
| 2000 | 24.8 | 18.4 | 23.6 | 23.3 | 24.8 | 19.2 | 27.5 | 31.0 | 26.2 | 23.7 | 20.1 | 15.8 | 15.6 |
| 2005 | 26.0 | 19.0 | 24.4 | 24.3 | 26.3 | 19.9 | 29.8 | 33.1 | 27.6 | 25.0 | 20.2 | 16.6 | 16.6 |
| **Population under 15 year (Percentage)** | | | | | | | | | | | | | |
| 1990 | 35.2 | 43.7 | 37.9 | 37.6 | 35.5 | 43.4 | 32.8 | 28.1 | 31.8 | 39.0 | 41.7 | 51.2 | 50.4 |
| 1995 | 33.3 | 43.5 | 35.9 | 35.6 | 33.3 | 42.6 | 30.8 | 26.8 | 30.2 | 35.6 | 41.3 | 49.2 | 50.0 |
| 2000 | 31.9 | 42.9 | 34.8 | 33.9 | 31.9 | 42.1 | 29.0 | 25.0 | 28.7 | 34.1 | 40.9 | 48.6 | 48.8 |
| 2005 | 30.4 | 41.1 | 33.1 | 32.4 | 30.3 | 39.5 | 26.9 | 23.0 | 27.6 | 32.0 | 39.9 | 46.1 | 46.5 |
| **Poulation of 15 to 64 years  (percentage** | | | | | | | | | | | | | |
| 1990 | 59.9 | 53.8 | 56.4 | 57.7 | 59.3 | 53.3 | 61.1 | 63.8 | 63.3 | 56.0 | 53.7 | 46.7 | 46.9 |
| 1995 | 61.5 | 54.1 | 58.3 | 59.6 | 61.1 | 54.0 | 62.5 | 64.2 | 64.8 | 58.7 | 53.3 | 48.1 | 47.7 |
| 2000 | 62.6 | 54.6 | 58.9 | 61.2 | 61.9 | 54.1 | 63.5 | 65.3 | 66.1 | 59.4 | 53.0 | 48.4 | 48.7 |
| 2005 | 63.7 | 56.1 | 60.0 | 62.7 | 62.8 | 55.7 | 64.3 | 66.1 | 67.0 | 60.3 | 53.3 | 50.1 | 50.6 |
| **Population of 65 and more age(Percentage)** | | | | | | | | | | | | | |
| 1990 | 4.9 | 2.4 | 5.6 | 4.7 | 5.1 | 3.4 | 6.2 | 8.1 | 4.9 | 5.1 | 4.6 | 2.1 | 2.6 |
| 1995 | 5.2 | 2.4 | 5.8 | 4.8 | 5.6 | 3.5 | 6.7 | 8.9 | 5.1 | 5.7 | 5.4 | 2.8 | 2.3 |
| 2000 | 5.5 | 2.5 | 6.3 | 4.8 | 6.2 | 3.8 | 7.5 | 9.7 | 5.2 | 6.5 | 6.1 | 3.0 | 2.5 |
| 2005 | 5.9 | 2.8 | 6.9 | 4.9 | 6.9 | 4.8 | 8.8 | 10.9 | 5.4 | 7.7 | 6.8 | 3.9 | 3.0 |
| **Births** | | | | | | | | | | | | | |
| 1990-1995 | 318,298 | 14,099 | 26,071 | 24,394 | 42,015 | 7,021 | 11,020 | 7,364 | 131,554 | 25,832 | 5,986 | 1,751 | 21,191 |
| 1995-2000 | 338,967 | 15,466 | 26,272 | 26,496 | 43,044 | 6,766 | 10,352 | 7,181 | 148,056 | 25,163 | 5,678 | 1,698 | 22,795 |
| 2000-2005 | 350,539 | 16,541 | 25,929 | 27,252 | 42,350 | 6,449 | 9,828 | 6,706 | 160,029 | 24,167 | 5,250 | 1,627 | 24,411 |
| **Gross Fertility Rate (by 1,000 persons)** | | | | | | | | | | | | | |
| 1990-1995 | 25.06 | 36.30 | 27.81 | 26.50 | 24.31 | 36.14 | 21.99 | 18.03 | 22.30 | 24.95 | 33.90 | 40.83 | 44.95 |
| 1995-2000 | 24.13 | 35.07 | 25.91 | 26.14 | 23.30 | 32.90 | 19.80 | 16.85 | 21.97 | 23.47 | 31.88 | 38.11 | 42.00 |
| 2000-2005 | 22.70 | 33.21 | 23.87 | 24.56 | 21.54 | 29.83 | 18.16 | 15.25 | 20.97 | 21.91 | 28.98 | 35.43 | 39.30 |
| **Deaths** | | | | | | | | | | | | | |
| 1990-1995 | 66,881 | 2,111 | 5,552 | 5,507 | 9,127 | 1,529 | 2,952 | 2,780 | 25,116 | 6,398 | 1,355 | 413 | 4,041 |
| 1995-2000 | 72,472 | 2,170 | 5,825 | 5,922 | 9,614 | 1,402 | 3,066 | 2,999 | 29,117 | 6,710 | 1,323 | 379 | 3,945 |
| 2000-2005 | 78,450 | 2,223 | 6,145 | 6,191 | 10,232 | 1,306 | 3,246 | 3,216 | 33,356 | 7,037 | 1,276 | 341 | 3,881 |
| **Gross Mortality Rate (By 1,000 personas)** | | | | | | | | | | | | | |
| 1990-1995 | 5.26 | 5.44 | 5.92 | 5.98 | 5.28 | 7.87 | 5.89 | 6.81 | 4.26 | 6.18 | 7.67 | 9.63 | 8.57 |
| 1995-2000 | 5.16 | 4.92 | 5.74 | 5.84 | 5.20 | 6.82 | 5.87 | 7.04 | 4.32 | 6.26 | 7.43 | 8.51 | 7.27 |
| 2000-2005 | 5.08 | 4.46 | 5.66 | 5.58 | 5.21 | 6.04 | 6.00 | 7.31 | 4.37 | 6.38 | 7.04 | 7.43 | 6.25 |
| **Natural Grouth** | | | | | | | | | | | | | |
| 1990-1995 | 251,417 | 11,988 | 20,519 | 18,887 | 32,888 | 5,492 | 8,068 | 4,584 | 106,438 | 19,434 | 4,631 | 1,338 | 17,150 |
| 1995-2000 | 266,495 | 13,296 | 20,447 | 20,574 | 33,430 | 5,364 | 7,286 | 4,182 | 118,939 | 18,453 | 4,355 | 1,319 | 18,850 |

DEMOGRAPHIC INDICATORSN OBTAINED FROM THE POPULATION  ESTIMATIONS AND PROJECTIONS
BY PROVINCE AND INDIGENOUS DISTRICT:  PERIOD: 1990-2005

| | República | Province | | | | | | | | | Comarca Indígena | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Bocas del Toro | Coclé | Colón | Chiriquí | Darién | Herrera | Los Santos | Panamá | Veraguas | Kuna Yala | Emberá | Ngöbe Buglé |
| **Annual  Geometric  Groth Rate (by 100 person)** | | | | | | | | | | | | | |
| 1990-1995 | 2.07 | 2.65 | 1.69 | 1.98 | 1.39 | 1.16 | 0.97 | 0.93 | 2.74 | 0.76 | 0.15 | 0.93 | 2.89 |
| 1995-2000 | 2.00 | 2.52 | 1.48 | 1.91 | 1.30 | 1.13 | 0.73 | 0.78 | 2.66 | 0.64 | 0.20 | 0.62 | 2.83 |
| 2000-2005 | 1.83 | 2.41 | 1.30 | 1.74 | 1.20 | 0.89 | 0.66 | 0.49 | 2.40 | 0.50 | 0.48 | 0.58 | 2.66 |
| **Total Life Expectancy at Birth (years)** | | | | | | | | | | | | | |
| 1990-1995 | 72.87 | 67.83 | 72.36 | 70.21 | 73.44 | 64.06 | 73.80 | 74.58 | 75.74 | 70.87 | 67.27 | 59.54 | 61.22 |
| 1995-2000 | 73.78 | 69.19 | 73.31 | 70.88 | 74.43 | 66.65 | 74.73 | 75.03 | 76.20 | 71.88 | 68.24 | 62.13 | 64.09 |
| 2000-2005 | 74.74 | 70.72 | 74.38 | 71.97 | 75.50 | 68.95 | 75.80 | 75.86 | 76.67 | 73.04 | 69.69 | 64.78 | 66.74 |
| **Male Life Expectancy at Birth (years))** | | | | | | | | | | | | | |
| 1990-1995 | 70.22 | 65.88 | 70.62 | 67.64 | 71.14 | 61.77 | 71.85 | 72.16 | 72.80 | 69.42 | 63.50 | 57.66 | 58.35 |
| 1995-2000 | 71.25 | 67.60 | 71.77 | 68.27 | 72.43 | 64.58 | 73.06 | 72.75 | 73.27 | 70.60 | 64.97 | 60.19 | 61.48 |
| 2000-2005 | 72.25 | 69.19 | 72.86 | 69.31 | 73.68 | 66.92 | 74.31 | 73.65 | 73.73 | 71.72 | 66.69 | 62.78 | 64.24 |
| **Female Life Expectancy at Birth (years)** | | | | | | | | | | | | | |
| 1990-1995 | 75.65 | 69.87 | 74.18 | 72.9 | 75.85 | 66.46 | 75.84 | 77.12 | 78.83 | 72.39 | 71.23 | 61.51 | 64.23 |
| 1995-2000 | 76.43 | 70.85 | 74.93 | 73.63 | 76.52 | 68.83 | 76.49 | 77.42 | 79.28 | 73.22 | 71.68 | 64.16 | 66.84 |
| 2000-2005 | 77.36 | 72.32 | 75.98 | 74.77 | 77.41 | 71.08 | 77.37 | 78.19 | 79.75 | 74.42 | 72.83 | 66.88 | 69.36 |
| **Infant Mortality Rate (by 1,000 born alive)** | | | | | | | | | | | | | |
| 1990-1995 | 26.98 | 39.22 | 26.96 | 26.65 | 24.61 | 53.55 | 19.33 | 18.60 | 17.73 | 24.70 | 60.31 | 72.53 | 68.99 |
| 1995-2000 | 23.72 | 33.17 | 24.63 | 23.81 | 20.86 | 45.82 | 18.26 | 17.69 | 16.63 | 21.62 | 54.95 | 63.02 | 57.07 |
| 2000-2005 | 20.64 | 28.72 | 22.02 | 21.10 | 17.99 | 40.78 | 16.89 | 16.40 | 14.20 | 18.91 | 51.24 | 57.16 | 49.98 |
| **Under  1 year Mortality** | | | | | | | | | | | | | |
| 1990-1995 | 8,587 | 553 | 703 | 650 | 1,034 | 376 | 213 | 137 | 2,333 | 638 | 361 | 127 | 1,462 |
| 1995-2000 | 8,041 | 513 | 647 | 631 | 898 | 310 | 189 | 127 | 2,462 | 544 | 312 | 107 | 1,301 |
| 2000-2005 | 7,894 | 475 | 571 | 575 | 762 | 263 | 166 | 110 | 2,273 | 457 | 269 | 93 | 1,220 |
| **0 – 4 Deaths** | | | | | | | | | | | | | |
| 1990-1995 | 9445 | 625 | 797 | 733 | 1078 | 396 | 226 | 149 | 2,570 | 707 | 399 | 147 | 1,618 |
| 1995-2000 | 8971 | 595 | 741 | 719 | 947 | 325 | 202 | 137 | 2,736 | 612 | 351 | 125 | 1,481 |
| 2000-2005 | 8154 | 557 | 658 | 657 | 807 | 273 | 177 | 119 | 2,585 | 518 | 301 | 107 | 1,395 |
| **1 – 4 Deaths** | | | | | | | | | | | | | |
| 1990-1995 | 858 | 71 | 83 | 83 | 44 | 20 | 13 | 12 | 248 | 69 | 39 | 20 | 156 |
| 1995-2000 | 930 | 82 | 88 | 87 | 49 | 15 | 13 | 11 | 281 | 68 | 38 | 18 | 180 |
| 2000-2005 | 920 | 82 | 83 | 82 | 46 | 11 | 11 | 9 | 314 | 61 | 32 | 14 | 175 |

On the other hand, the high mortality that  reflect the indigenous districts causes a lower Life Expectancy at birth all the indigenous districts, which will be increased mortality levels descends during the period  of projection.

## III. Mortality by reason of death for Indigenous District: year 2002

The analysis of the main causes of death registered in the Kuna Yala District    through the Rate of Mortality during the registry period of 2002 shows that Tuberculosis is the first cause of death in this Group with near 62 cases by 100,000 thousand people. Pneumonia and Diarrhea are found in the second and third place with 41 and 39 deaths by 100,000 thousand persons. This review by sex indicates that the male population of this indigenous group are more affected than females in all five main causes but this difference is broader when we analyze the cause of death by HIV.

The  Ngöbe Bugle indigenous group main cause of death in the year 2002 is Malnutrition cause, that originate 37 deaths by every 100,000 persons. This cause of death affect more

females than males in this group observing a mortality rate of 42 female deaths compared to 32 male deaths by 100,000 persons.

| MAIN CAUSES OF DEATH IN SOME INDIGENOUS DISTRICT: YEAR 2002 | | | | | | | |
|---|---|---|---|---|---|---|---|
| Order | Causes (1) | | Deaths | | | | |
| | | | Total | | Men | | Women |
| | | Number | Rate (2) | Number | Rate (2) | Number | Rate (2) |
| | **Kuna Yala District** | **202** | 564.7 | **121** | 724.6 | **81** | 424.7 |
| | | | | | | | |
| 1 | Tuberculosis | 22 | 61.5 | 14 | 83.8 | 8 | 41.9 |
| 2 | Pneumonia | 15 | 41.9 | 9 | 53.9 | 6 | 31.5 |
| 3 | Diarrhea and gastroenteritis of presumed infectious origin | 14 | 39.1 | 10 | 59.9 | 4 | 21 |
| 4 | Anemias | 14 | 39.1 | 8 | 47.9 | 6 | 31.5 |
| 5 | Illness for virus gives the human immunodeficiency (HIV) | 8 | 22.4 | 7 | 41.9 | 1 | 5.2 |
| | | | | | | | |
| | **Ngöbe Buglé District** | **255** | 208.3 | **137** | 227.5 | **118** | 189.7 |
| | | | | | | | |
| 1 | Malnutrition | 45 | 36.8 | 19 | 31.6 | 26 | 41.8 |
| 2 | Acident, self injured , aggressions and another violence | 27 | 22.1 | 17 | 28.2 | 10 | 16.1 |
| 3 | Diarrhea and gastroenteritis of Presumed infectious origin | 26 | 21.2 | 16 | 26.6 | 10 | 16.1 |
| 4 | Tuberculosis | 21 | 17.2 | 9 | 14.9 | 12 | 19.3 |
| 5 | Congenital Malformation, deformities and cromosomic anomalies. | 18 | 14.7 | 12 | 19.9 | 6 | 9.6 |
| | | | | | | | |
| (1) Base on the List of Mortality of 80 groups of causes of death the International Statistical Classification of Illnesses and Problems Related with the Health (Tenth Revision). | | | | | | | |
| (2) for 100,000 inhabitants, based on the estimate of the total population, by groups and age, at the 1° of July. | | | | | | | |
| - Null quantity or zero. | | | | | | | |

In the Ngöbe Bugle District there is an important incidence of death caused by gressions and diarrhea  but the female population is more affected by Tuberculosis with 19 deaths per 100,000 thousand people

 Calation:  Es the result of to relate the deaths for certain cause, in the year z, with the total of deaths happened in that year z. The causes of deaths they are classified according to the List of Mortality  of the International Statistical Classification  of Illnesses and Problems related with the Health (Tenth Revision)

## IV. Incidence of mortality for HIV, (AIDS) Acquired Immunodeficiency Syndrome.

### Incidence of mortality for HIV (AIDS) for groups of age and sex

Description: Proportion of total deaths or for groups of age whose cause is HIV (AIDS) regarding the total population or to the group of age in reference.

Calculation: Number of deaths, total or for groups of age, happened in a timeframe, generally one year whose cause was HIV (AIDS) among the total population or among the population for groups of age, respectively, for 10,000.

General Source: Comptrollership of the Republic. Direction of Statistical and Census. Section of Statistical Vital

### HIV MORTALITY RATE (AIDS) IN THE REPUBLIC OF PANAMA
BY PROVINCE AND INDIGENOUS DISTRICT : PERIOD 1998 – 2002

| Total Country Province Ind.District | Periods | | | | |
|---|---|---|---|---|---|
| | 1998 | 1999 | 2000 | 2001 | 2002 |
| Total | 15.2 | 16.4 | 16.9 | 15.7 | 15.5 |
| Bocas del Toro | 0 | 0 | 0.7 | 1 | 1 |
| Cocle | 10.2 | 4 | 4 | 3.3 | 5.6 |
| Colon | 28.1 | 33.9 | 42 | 45.8 | 47.5 |
| Chiriqui | 2.4 | 5.4 | 4.2 | 4.9 | 5.9 |
| Darien | 0 | 0 | 1.5 | 7 | 2.3 |
| Herrera | 2.9 | 4.8 | 5.8 | 1.8 | 4.6 |
| Los Santos | 1.3 | 8.8 | 11.3 | 3.4 | 6.8 |
| Panama | 24.7 | 25 | 25.6 | 22.3 | 20.2 |
| Veraguas | 1.8 | 4.9 | 0.9 | 1.8 | 2.7 |
| Kuna Yala | 10.2 | 12.6 | 12.5 | 20.2 | 22.4 |

The cause of death by HIV is highly reflected in the urban Provinces such as Panama and Colon that total more that half the amount of deaths occurred in the country caused by Aids. In the year 2000 both provinces sum up to 67 percent of the total amount of cases of deaths related to HIV. In this same year the indigenous district of Kuna Yala had a grater incidence of death by 100.000 people than those observed in the capital province of Panama.

**V. Population and Health.**

**1.   Population assisted in the Republic by number of medical, nurses and readiness of beds for Province and Indigenous District: Period 1998–2002.**

The total access to medical  facilities can be observed in the following table, according to this information in the year 2002 there were 776 Panamanian to be attended by one doctor. At this level all the provinces show high density of population to be attended by a doctor.

This indicator double the amount of people to be attended to in the indigenous district, for example at the Ngôbe Bugle Indigenous District in the year 2002 there were more than 15,000 people to be attended by a doctor. This call our attention because it really reduce the opportunity of the population to receive a better and individual attention by doctors. Observing the number of inhabitant by nurse is almost a similar condition.

At the total level of the Republic we find 864 inhabitant per nurse, but if we lower this indicator to the indigenous district we observe nearly the double amount of person per nurse. The heath situation gets even more difficult if we analyze the amount Hospital beds available for the population at risk, concluding that at the national level the amount of beds available for the Population is calculated around 2 beds for each 1000 inhabitants in the year 2002.

But in the indigenous area it doesn't  even reach one bed for each 1000 persons. The Government is doing a great effort to improve these figures and to offer better heath solution for the population but until this is fulfilled the indigenous population continue to be the most needed in this sector.

**POPULATION ATENDED TO IN THE REPUBLIC OF BY NUMBER O NURSES AND AVAILABILITY OF BEDS: PERIOD**

**Número de habitantes por médico(a)**

| Provinces | Periods | | | | |
|---|---|---|---|---|---|
| | 1998 | 1999 | 2000 | 2001 | 2002 |
| Total | 816 | 790 | 776 | 782 | 776 |
| Bocas del Toro | 1174 | 1172 | 1186 | 1078 | 1080 |
| Cocle | 1597 | 1633 | 1617 | 1590 | 1565 |
| Colon | 1468 | 1367 | 1244 | 1251 | 1230 |
| Chiriqui | 974 | 956 | 978 | 980 | 963 |
| Darien | 1592 | 1550 | 1510 | 1294 | 1197 |
| Herrera | 1000 | 888 | 852 | 777 | 760 |
| Los Santos | 1190 | 1065 | 998 | 939 | 924 |
| Panama | 570 | 556 | 550 | 532 | 566 |
| Veraguas | 1484 | 1453 | 1336 | 1312 | 1295 |
| Kuna Yala | 4419 | 2359 | 2532 | 2542 | 2236 |
| Emberá | - | - | 0 | - | - |
| Ngöbe Buglé | - | - | 55044 | 59617 | 15303 |
| **Number of inhabitants by nurses** | | | | | |
| Total | 890 | 852 | 886 | 914 | 864 |
| Bocas del Toro | 959 | 905 | 956 | 842 | 793 |
| Cocle | 1525 | 1420 | 1440 | 1567 | 1489 |
| Colon | 1316 | 1034 | 975 | 1104 | 1048 |
| Chiriqui | 1002 | 935 | 921 | 963 | 905 |
| Darien | 1150 | 1268 | 1458 | 1708 | 1539 |
| Herrera | 761 | 755 | 696 | 674 | 635 |
| Los Santos | 1112 | 872 | 755 | 848 | 798 |
| Panama | 682 | 672 | 722 | 742 | 705 |
| Veraguas | 1425 | 1379 | 1534 | 1611 | 1519 |
| Kuna Yala | 1263 | 1220 | 1612 | 1424 | 1278 |
| Embera | - | - | 0 | - | - |
| Ngöbe Bugle | - | - | 13760 | 14904 | 17489 |
| **Number of hospital beds by each 1000 inhabitants** | | | | | |
| Total | 2.61 | 2.58 | 2.56 | 2.49 | 2.46 |
| Bocas del Toro | 2.16 | 1.97 | 2.29 | 2.19 | 1.97 |
| Cocle | 1.64 | 1.41 | 1.47 | 1.46 | 1.86 |
| Colon | 2.09 | 2.27 | 2.2 | 1.97 | 2 |
| Chiriqui | 2.25 | 2.14 | 2.13 | 2.24 | 2.53 |
| Darien | 3.89 | 3.66 | 3.67 | 3.23 | 2.88 |
| Herrera | 3.61 | 3.33 | 3.3 | 3.53 | 3.21 |
| Los Santos | 6.84 | 6.62 | 6.63 | 6.72 | 5.9 |
| Panama | 2.96 | 3 | 2.9 | 2.77 | 2.66 |
| Veraguas | 1.76 | 1.69 | 2.02 | 1.91 | 1.92 |
| Kuna Yala | 1.78 | 1.78 | 1.75 | 2.16 | 1.65 |
| Embera | - | - | 0 | - | - |
| Ngöbe Bugle | - | - | 0 | 0.03 | 0.15 |

**Number of inhabitants by doctors(a)**

Description: Es the relationship of the quantity of inhabitants that on the average each doctor would assist. It includes public sector and private

Calculation: Result of  dividing  population at the 1  of July annually among the quantity  of medical registered for installation  of health.

Continuous Source: Registry of facilities  of health  of the republic, public, and private. Information gathered by the Section of Statistical Social (DEC - General Comptrollership of the Republic)

**(Number of inhabitants by Nurse)**

Description: Es the relationship of the quantity  of inhabitants that on the average each nurse would assist. It includes public sector and private

Calculation: Result of dividing the  population at the 1  of July   annually among the quantity  of nurses registered by installation  of health

Continuous Source: Registry of facilities   of health   of the Republic, so much public as private. Information gathered by the Section of Statistical Social (DEC - General Comptrollership of the Republic)

## 2.  Immunization of children smaller than 1 year in the Republic of Panama for Province and Indigenous District: period 1998-2000

**Percentage of children  immunized under 1 year. Polio**

Description: it Represent the number of children smaller than one year immunized against Polio.

Calculation:  Children smaller than one year with the third dosage of Polio among population smaller than one year.

Source: Expanded  Program of Immunization Department  of Surveillance  and Protection Factors and of Risks to the Health and Illnesses., Ministry of Health.

The immunization program reach almost all the population at the province an district  level and the general pattern is to increase the covering each year. Each immunization vaccine cover different illness such as Polio, DPT, BCC, and measles.

This immune program is developed by the Ministry of  Health and is one of the most effective because in general the covering action toward the population at risk, (under one year) shows improvement that has contributed to disappear illness such as polio and measles in near 99 percent of the total population. The figures over 100 percent means that a child was immunized more that one time or were included other ages than under one year.

**PERCENTAGE OF CHILDREN UNDER ONE YEAR IN THE REPUBLIC**
**BY PROVINCE AND INDIGENOUS DISTRICT : PERIOD 1998-2002**

**Percentage or minor of 1 year immunize from Polio**

| Provincias | Periodos | | | | |
|---|---|---|---|---|---|
| | 1998 | 1999 | 2000 | 2001 | 2002 |
| Total | 103 | 96.3 | 100 | 95 | 85.3 |
| Bocas del Toro | 96 | 77.2 | 89.9 | 97.4 | 96.4 |
| Cocle | 10.7 | 88.6 | 94.8 | 94.7 | 74.7 |
| Colon | 90.4 | 90.8 | 104.5 | 104.5 | 100.6 |
| Chiriqui | 93.1 | 93.4 | 103.5 | 101.5 | 86.9 |
| Darien | 92.5 | 101.4 | 97.2 | 97.9 | 105.9 |
| Herrera | 87 | 94.4 | 99.3 | 106.9 | 87.3 |
| Los Santos | 98.4 | 105.4 | 110.6 | 94.6 | 83.9 |
| Panama | 117.4 | 104.3 | 103.3 | 101.4 | 81.7 |
| Veraguas | 83.6 | 89.3 | 92.6 | 91 | 82.9 |
| Kuna Yala | 80.4 | 74.6 | 74.4 | 92.5 | 84.3 |
| Ngöbe Bugle | - | - | - | 102.3 | 87.9 |

PERCENTAGE OF CHILDREN UNDER ONE YEAR IMMUNIZE BY. DPT

| | 1998 | 1999 | 2000 | 2001 | 2002 |
|---|---|---|---|---|---|
| Total | 97.5 | 92.4 | 98.1 | 99.6 | 86.5 |
| Bocas del Toro | 99.3 | 77 | 88.2 | 97.1 | 98.5 |
| Cocle | 100 | 89.8 | 94 | 93.9 | 75.9 |
| Colon | 89.5 | 88.7 | 103.6 | 104.3 | 103.4 |
| Chiriqui | 97.6 | 93.2 | 103.2 | 101.6 | 87 |
| Darien | 91.5 | 100.4 | 99.2 | 95.4 | 107.9 |
| Herrera | 89 | 91.1 | 98.9 | 107.8 | 86.7 |
| Los Santos | 96.1 | 103.6 | 109.3 | 93.6 | 84.7 |
| Panama | 102.5 | 96.6 | 98.9 | 98.8 | 82.1 |
| Veraguas | 84.3 | 84.7 | 93.1 | 90 | 82.2 |
| Kuna Yala | 78.4 | 79.1 | 73 | - | 89.1 |
| Embera | - | - | - | 75.3 | - |
| Ngöbe Bugle | - | - | - | 123.4 | 97 |

PERCENTAGE OF CHILDREN UNDER ONE YEAR IMMNUNIZE BY BCG

| | 1998 | 1999 | 2000 | 2001 | 2002 |
|---|---|---|---|---|---|
| Total | 110 | 107.5 | 115 | 107.7 | 92.3 |
| Bocas del Toro | 109.2 | 116.9 | 121.1 | 116.7 | 127.8 |
| Cocle | 101.4 | 103.7 | 106.4 | 107.7 | 82.7 |
| Colon | 111.1 | 105.1 | 105.5 | 101.4 | 84.6 |
| Chiriqui | 118 | 125.3 | 127.5 | 113.9 | 95.3 |
| Darien | 94 | 95.5 | 98.7 | 106.4 | 99.7 |
| Herrera | 98 | 104.8 | 114.4 | 104.6 | 88.8 |
| Los Santos | 112.4 | 118 | 88.4 | 95.2 | 84.5 |
| Panama | 113.3 | 102.3 | 117.1 | 98.8 | 85.1 |
| Veraguas | 99.8 | 99.4 | 103.1 | 102.3 | 85.5 |
| Kuna Yala | 89 | 94.8 | 90.7 | 90.9 | 94.1 |
| Ngöbe Bugle | - | - | - | 102.7 | 125.6 |

PERCENTAGE OF CHILDREN UNDER ONE YEAR IMMUNIZED AGAINST. Measles

| | 1998 | 1999 | 2000 | 2001 | 2002 |
|---|---|---|---|---|---|
| Total | 95.5 | 90 | 96.7 | 95.4 | 88.5 |
| Bocas del Toro | 89 | 84.9 | 96.7 | 106.4 | 106.1 |
| Cocle | 98 | 93.1 | 95.2 | 100.7 | 81 |
| Colon | 93 | 83.6 | 101.9 | 102.4 | 101.3 |
| Chiriqui | 95.8 | 88.8 | 105 | 103 | 88.2 |
| Darien | 90.5 | 102.1 | 101.5 | 101.7 | 104 |
| Herrera | 94.1 | 87.3 | 102.1 | 101 | 87.4 |
| Los Santos | 99.8 | 86.2 | 109.9 | 98.4 | 82.9 |
| Panama | 98.4 | 91.9 | 94.2 | 88.9 | 81.2 |
| Veraguas | 92.5 | 103.2 | 90 | 92.1 | 82.3 |
| Kuna Yala | 86 | 76.8 | 69.1 | 98.3 | 91.5 |
| Ngöbe Bugle | - | - | - | 102.7 | 125.6 |

## 3. Malnutrition of the population under 5 years in the Republic for Province and District Indígena1998-2000.

## 3.1 Prevalently of the malnutrition in population under five years for Province and Indigenous District.

Description:  Es the number of children under 5 years that  suffer malnutrition in certain moment.

Calculation:  quotient among the total of undernourished children (captured in growth and development) smaller than 5 years among the total of children smaller 5 years.

Source: Department of Nutrition, Ministry  of Health.

**Prevalent of malnutrition in smaller than 5 years in the Republic for Province and district: period 1998 – 2001**

| Total Province | Periods | | | | |
|---|---|---|---|---|---|
| and District | 1998 | 1999 | 2000 | 2001 | 2002 |
| Total | 4.4 | 5.4 | 3.6 | 2 | - |
| Bocas del Toro | 17.8 | 16.4 | 18.3 | - | - |
| Cocle | 5.9 | 6.6 | 4.8 | 6.9 | - |
| Colon | 1.3 | 1.1 | 2.7 | 0.8 | - |
| Chiriqui | 5.7 | 4.9 | 3.3 | 3.1 | - |
| Darien | 15.2 | 11.5 | 5.4 | 5.6 | - |
| Herrera | 3.9 | 1.5 | 0.9 | 1.4 | - |
| Los Santos | 2.5 | 2.4 | 1.4 | 1.8 | - |
| Panama | 1 | 2.8 | 0.9 | - | - |
| Veraguas | 5.7 | 6.2 | 2.4 | 5.1 | - |
| Kuna Yala | 25.3 | 31.8 | 27.4 | 1.1 | - |

Malnutrition at the national level shows great improvement because its figure tend to be smaller year by year. This is a reflection of the government Health Programs oriented to lower and improve the nutrition level of the population. In 1998 the total malnutrition population in the republic reach  4.4 percent while in the year 2001 this indicator reduces in 50 per cent achieving 2 percent of malnutrition at the national level.

In Urban areas this percent is practically cero, such is the case of the capital province of Panama and secondly in the province of Colon. In some indigenous District, such as Kuna Yala we still observe important levels of malnutrition over 25 percent. This is related to cultural aspects and difficulty to reach the area.

### 3.2 Un  five years in programs of complementary feeding for Province and Indigenous District

Description:  Is the number of children smaller than 5 years that suffer malnutrition in certain moment.

Calculation:  quotient among the total of undernourished children (captured in growth and development) smaller than 5 years among the total of children smaller 5 years.

Source: Department of Nutrition, Ministry  of Health.

**Under 5  years in programs of complementary feeding in the Republic for Province and Indigenous District: period 1998 – 2002**

| Total<br>Total Province<br>And District | Period | | | | |
|---|---|---|---|---|---|
| | 1998 | 1999 | 2000 | 2001 | 2002 |
| Bocas del Toro | - | - | 6743 | 2429 | 2918 |
| Cocle | - | - | 3896 | 4996 | 3966 |
| Colon | - | - | 1767 | 695 | 776 |
| Chiriqui | - | - | 8193 | 5065 | 3855 |
| Darien | - | - | 3107 | 1182 | 1885 |
| Herrera | - | - | 775 | 764 | 591 |
| Los Santos | - | - | 640 | 805 | 672 |
| Panama | - | - | 9213 | 9572 | 8740 |
| Veraguas | - | - | 4581 | 757 | 2056 |
| Kuna Yala | - | - | 3161 | 601 | 1362 |
| Ngöbe Bugle | - | - | - | 3224 | 6026 |

It is important to highlight that there is a growing concern to include the indigenous population in the benefits of these program  for example in the Ngobe Bugle group the amount of population increased  near fifty percent during the period 2001 – 2002. The same characteristics are observed in the Kuna Yala Group.

### VI. Poverty:

#### 1.   Probability of to be Poor and Order of Poverty

The probability of  beeing poor is reflected in percentages and is the lates information obtained since 1997. In this chart we obseve that lower the percentage the lower is the probability of being poor. From these resul the poorest area is centered in tha indigenous district Kuna Yala and the Province of Darien while the Capital Province and dense population Province of Panama present de lowezt level of poverty with 28 percent.

Poverty is related to rural areas land high levels of mortality. At the Province level the Province of Darien that contain indigenous District also has a high percent of being poor with 83 percent of poverty.

**POVERTY INDICATORS IN THE REPUBLIC
BY PROVINCE AND INDIGENOUS DISTRICT 1997**

| Probability of being Poor | |
|---|---|
| **Province** | **1997** |
| Kuna Yala | 0.98 |
| Darien | 0.83 |
| Bocas | 0.75 |
| Veraguas | 0.74 |
| Cocle | 0.68 |
| Chiriqui | 0.6 |
| Herrrera | 0.53 |
| Los Santos | 0.51 |
| Colon | 0.48 |
| Panama | 0.28 |

| Poverty Order | |
|---|---|
| Kuna Yala | 1 |
| Darien | 2 |
| Bocas | 3 |
| Veraguas | 4 |
| Cocle | 5 |
| Chiriqui | 6 |
| Herrrera | 7 |
| Los Santos | 8 |
| Colon | 9 |
| Panama | 10 |

The order of poverty is another way of observing this negative factor and it is reflected in the same order with Kuna Yala Indigenous District as the Highest and the capital Province with the lowest.

Description: Probability that has a person of to be poor, estimated by its habits of consumption.

Calculation: The Methodology is based on building a mathematical model that allows to project the consumption annual per-capita obtained in the ENV to the Censuses of Population and Housing of 1990 determining for each registered domestic home in the census, its level of more probable consumption. This projection is carried out by means of lineal models of regression that express the consumption annual per-capita like function of a group of variable socio-economic, demographic and regional. The utilized procedure consisted on two stages. In the first one the common variables were selected the ENV97 and the Census 90 that allow to predict, of the possible more precise form, the

consumption annual per-capita. Then a series is applied  of lineal regressions, it is possible to select the best model  of consumption annual per-capita for each one  of the regions in the ENV97. In the second stage, using the dear parameters (coefficients) obtained in the ENV 97, they are applied to the data  of the census to obtain the prospective valor  of the level  of consumption in each home, it stops this way, later on to calculate the probability of to be poor in each home associated with the level  of consumption estimated in the Censuses.

## Bibliographical Index

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