

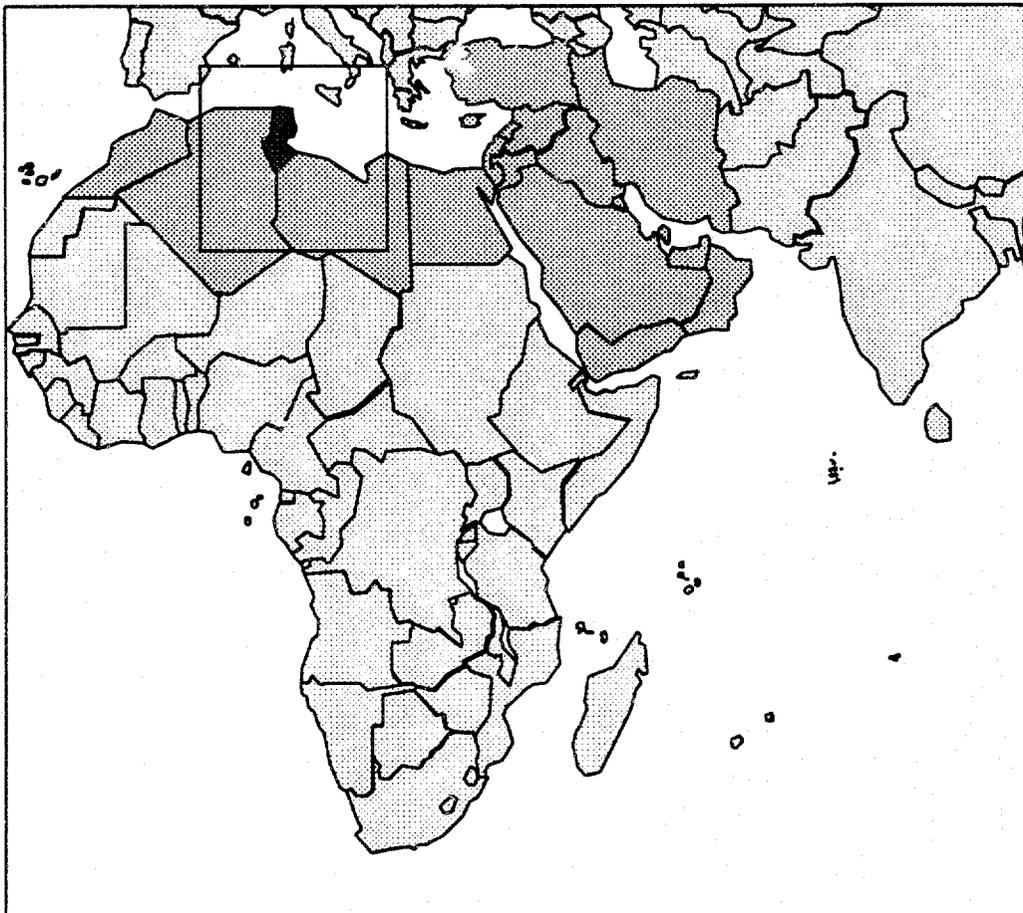
10/25/2013

*Country Health Profile*

# TUNISIA

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## Health Situation & Statistics Report 1994



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**The Center for International Health Information (CIHI), a project managed by Information Management Consultants, Inc. (IMC), prepared this document under the Data for Decision Making Project, #936-5991.05 (CIHI-II), contract number HRN-5991-C-00-3041-00, with the Office of Health and Nutrition, Center for Population, Health and Nutrition, Bureau for Global Programs, Field Support and Research, U.S. Agency for International Development (USAID).**

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# TUNISIA

## Country Health Profile

**T**his is one of a series of Country Health Profiles produced by the Center for International Health Information (CIHI). Each profile contains descriptive information and tables on the country's health and demographic characteristics, health indicators and trends, and when available, the health care system. Profile information is compiled from CIHI's databases and reference library, as well as through research and analysis of other data sources and reports.

The profiles are intended to provide current and trend data in a concise format for policy and decision-making, planning and evaluation, and monitoring of health status for use by individuals and organizations. Contact CIHI at the address on the preceding page for information on the availability of other health profiles and standard reports.

This profile contains national level health and demographic statistics available in CIHI's databases as of the date noted in each section. In order to enable CIHI to report the most current health and demographic statistics, please provide any more recent or more accurate data by contacting the center at the address on the previous page or through USAID, Office of Health and Nutrition, Center for Population, Health and Nutrition, Bureau for Global Programs, Field Support and Research.

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*\* Sources in this profile are referred to by a seven-digit code. Generally, the first three letters refer to an organization, agency, etc., and the first two numbers indicate the year of the publication or other source document. A complete list of sources appears at the end of the profile.*

# I: HEALTH & DEMOGRAPHIC OVERVIEW

## Current Demographic and Health Indicators

JULY 1994

Demographic Indicators			
INDICATOR	VALUE	YEAR	SOURCE
Total Population	8,582,600	1993	UNP9200
Urban Population	4,965,800	1993	UNP9200
Women Ages 15-49	2,180,200	1993	UNP9200
Infant Mortality	32	1993	WBK9302
Under-5 Mortality	37	1993	WBK9302
Maternal Mortality	127	1989	WHM9165
Life Expectancy At Birth:	68	1993	UNP9200
Number of Births	229,516	1993	UNP9200
Annual Infant Deaths	7,299	1993	CALXX01
Total Fertility Rate	3.4	1993	UNP9200

Child Survival Indicators			
INDICATOR	PERCENT	YEAR	SOURCE
<b>Vaccination Coverage</b>			
BCG	86	1992	WHE9301
DPT 3	100	1992	WHE9301
Measles	87	1992	WHE9301
Polio 3	100	1992	WHE9301
Tetanus 2	48	1992	WHE9301
DPT Drop Out	NA		
<b>Oral Rehydration Therapy</b>			
ORS Access Rate	100	1991	WHD9201
ORS and/or RHF Use	21	1992	WHD9300
<b>Contraceptive Prevalence</b>			
Modern Methods (15-49)	45	1992	MRF9220
All Methods (15-49)	52	1992	MRF9220
<b>Nutrition</b>			
Adequate Nutritional Status	88	1988	DHS8914
Appropriate Infant Feeding	NA		
A) Exclusive Breastfeeding	21	1988	DHS8914
B) Complementary Feeding	53	1988	DHS8914
Continued Breastfeeding	57	1988	DHS8914

Other Health Indicators			
INDICATOR	PERCENT	YEAR	SOURCE
<b>HIV-1 Seroprevalence</b>			
Urban	0	1991	BUC9103
Rural	NA		
<b>Access to Improved Water</b>			
Urban	99	1992	MRF9221
Rural	68	1992	MRF9221
<b>Access to Sanitation</b>			
Urban	100	1992	MRF9221
Rural	94	1992	MRF9221
Deliveries/Trained Attendants	79	1992	MRF9221

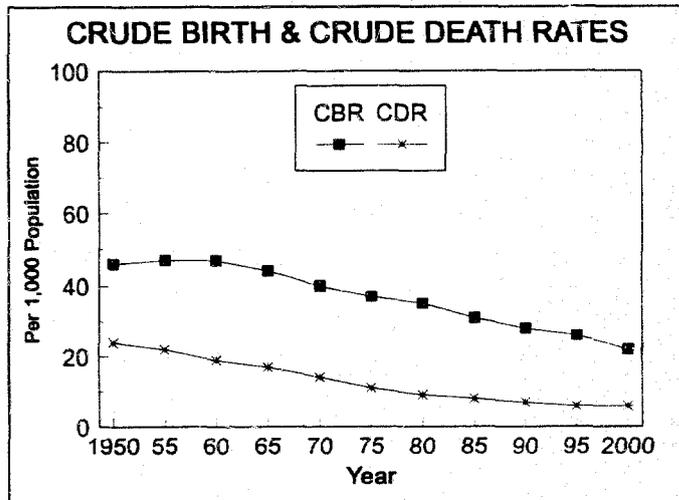
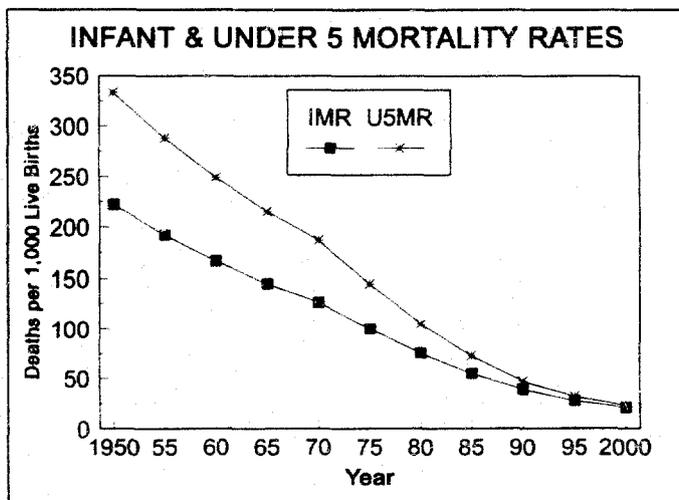
NA = Not available



# Trends in Selected Demographic and Health Indicators

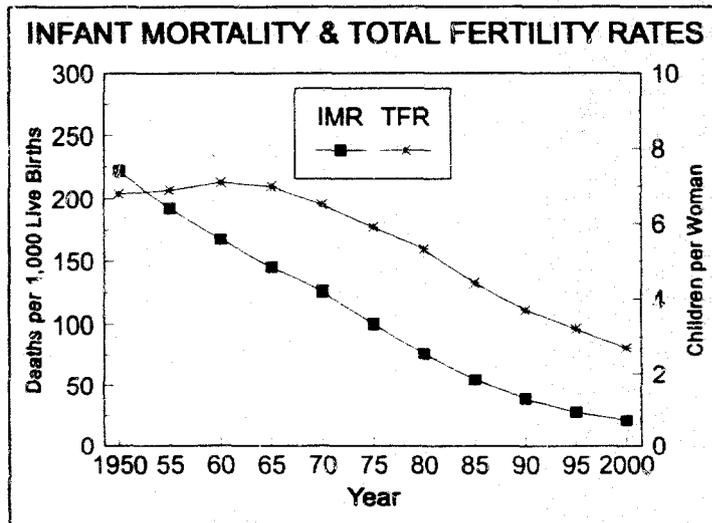
JULY 1994

INDICATOR	1950	1955	1960	1965	1970	1975	1980	1985	1990	1995	2000	SOURCE
Infant Mortality	222	192	167	145	126	100	76	55	39	28	21	WBK9302
Under Five Mortality	333	288	249	215	187	145	105	73	47	32	23	WBK9302
Crude Birth Rate	46	47	47	44	40	37	35	31	28	26	22	UNP9200
Crude Death Rate	24	22	19	17	14	11	9	8	7	6	6	UNP9200
Avg. Annual Growth Rate	2	2	2	2	2	2	3	2	2	2	2	UNP9200
Total Fertility Rate	6.8	6.9	7.1	7.0	6.5	5.9	5.3	4.4	3.7	3.2	2.7	UNP9200



### IMR and TFR

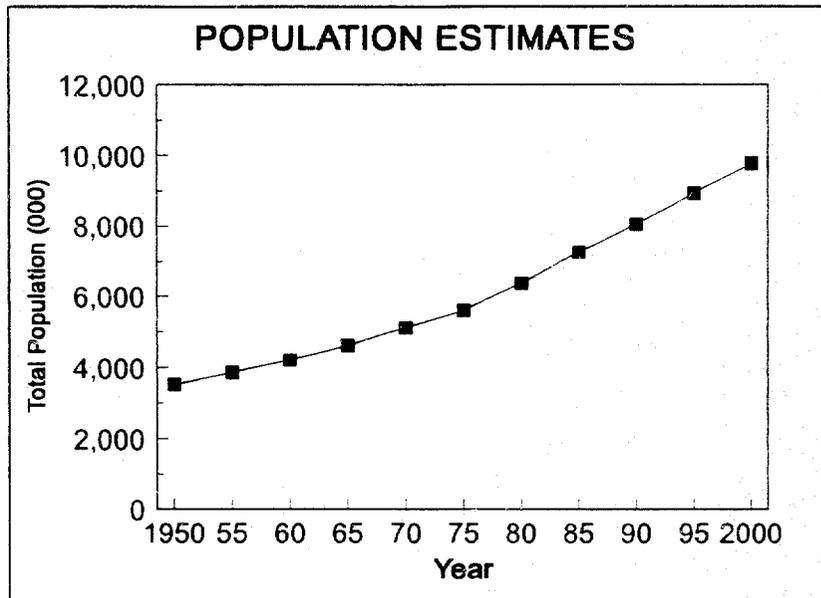
The relationship between IMR and TFR is currently a subject under review by the scientific community. While there is not conclusive evidence that the IMR and TFR are causally linked and necessarily decline together, there is empirical evidence for suspecting that such a reinforcing relationship exists as the pattern is observable in most countries.



## Population Estimates/Pyramid

JULY 1994

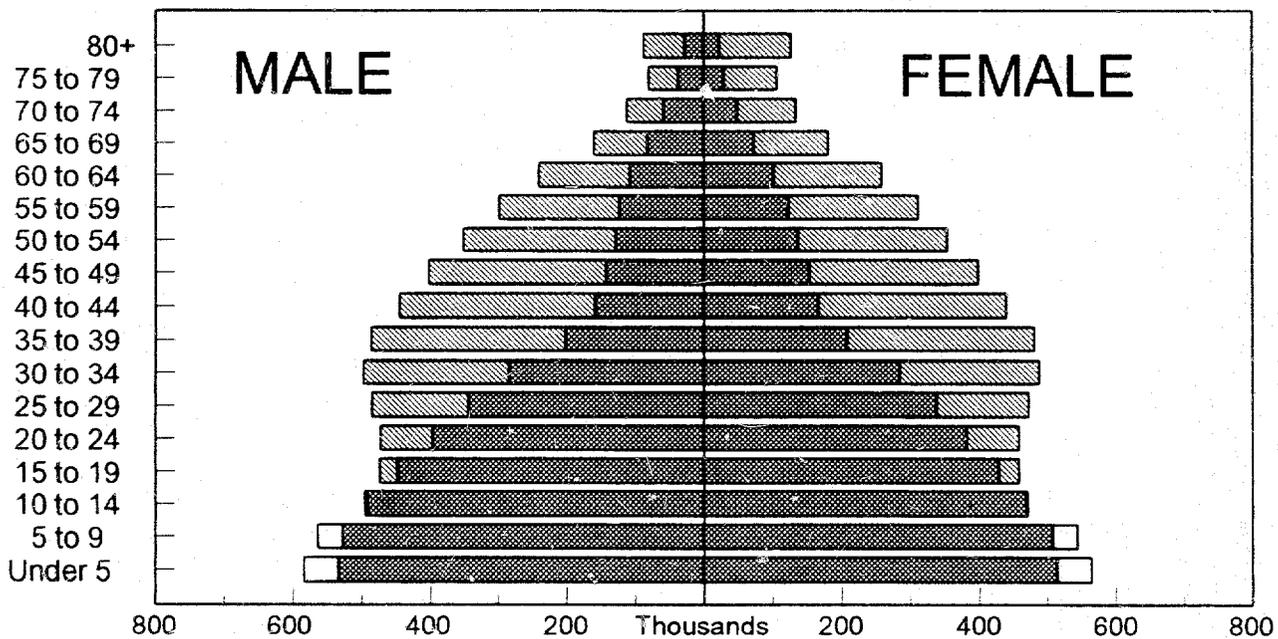
POPULATION ESTIMATES (000s)		
YEAR	VALUE	SOURCE
1950	3,530	UNP9200
1955	3,860	UNP9200
1960	4,221	UNP9200
1965	4,630	UNP9200
1970	5,127	UNP9200
1975	5,611	UNP9200
1980	6,384	UNP9200
1985	7,261	UNP9200
1990	8,057	UNP9200
1995	8,933	UNP9200
2000	9,781	UNP9200



## CURRENT & PROJECTED POPULATION

By Age & Gender: 1990 - 2020

Total Population 1990: 8,083,703 Total Population 2020: 12,143,683



1990
  2020 > 1990
  1990 > 2020

NOTE: For the younger age groups, the population in 2020 is projected to be less than that of 1990.

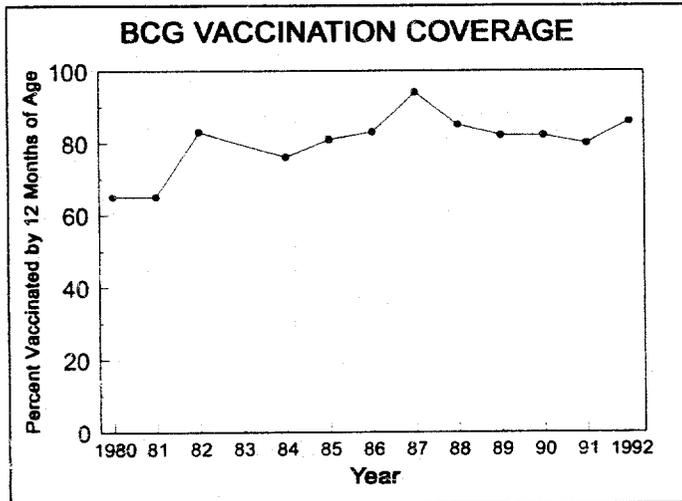
Source: BUC9401



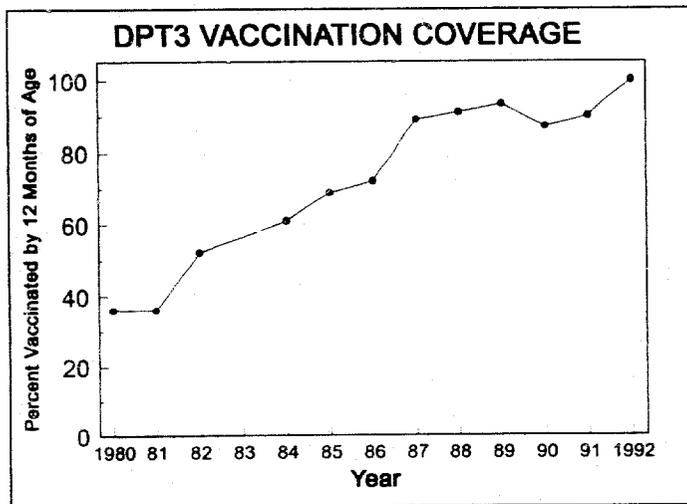
# Trends in Selected Health and Child Survival Indicators

## Vaccination Coverage Rates

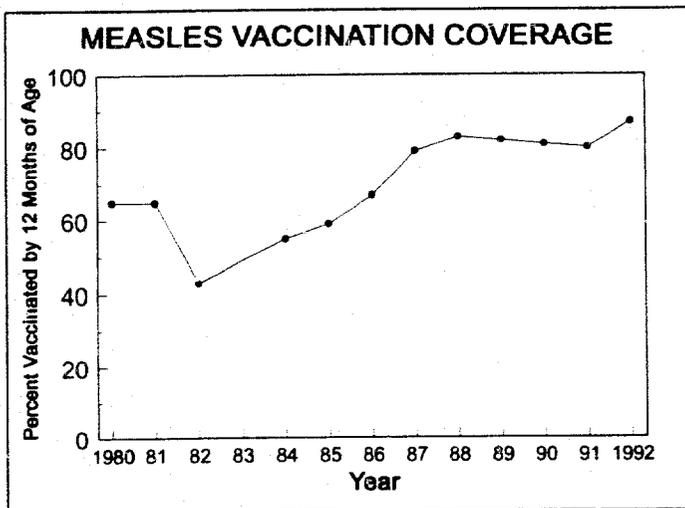
JULY 1994



BCG COVERAGE		
YEAR	PERCENT	SOURCE
1980	65	WHE8700
1981	65	WHE8700
1982	83	WHE8700
1983	NA	
1984	76	WHE8700
1985	81	WHE8700
1986	83	WHE8800
1987	94	WHE8900
1988	85	WHE8900
1989	82	WHE9001
1990	82	WHE9100
1991	80	WHE9202
1992	86	WHE9301

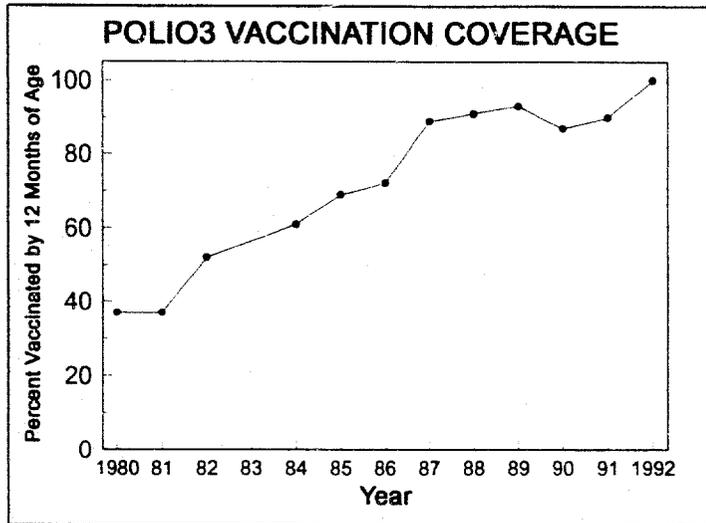


DPT3 COVERAGE		
YEAR	PERCENT	SOURCE
1980	36	WHE8700
1981	36	WHE8700
1982	52	WHE8700
1983	NA	
1984	61	WHE8700
1985	69	WHE8700
1986	72	WHE8800
1987	89	WHE8900
1988	91	WHE8900
1989	93	WHE9001
1990	87	WHE9100
1991	90	WHE9202
1992	100	WHE9301

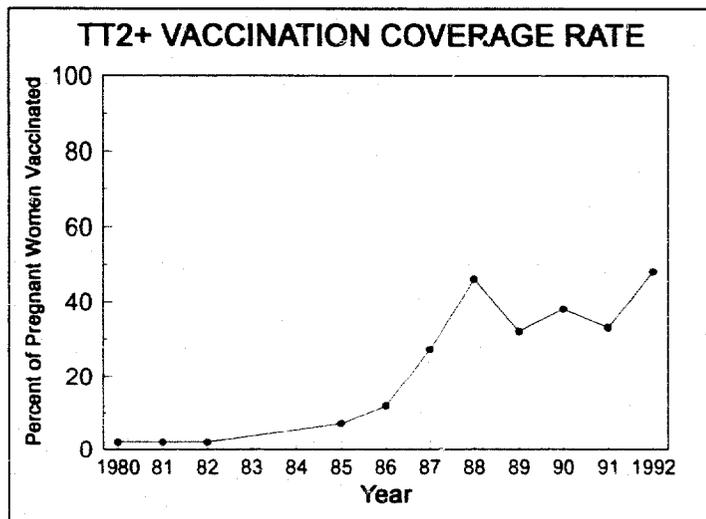


MEASLES COVERAGE		
YEAR	PERCENT	SOURCE
1980	65	WHE8700
1981	65	WHE8700
1982	43	WHE8700
1983	NA	
1984	55	WHE8700
1985	59	WHE8700
1986	67	WHE8800
1987	79	WHE8900
1988	83	WHE8900
1989	82	WHE9001
1990	81	WHE9100
1991	80	WHE9202
1992	87	WHE9301

## Vaccination Coverage Rates, continued



POLIO3 COVERAGE		
YEAR	PERCENT	SOURCE
1980	37	WHE8700
1981	37	WHE8700
1982	52	WHE8700
1983	NA	
1984	61	WHE8700
1985	69	WHE8700
1986	72	WHE8800
1987	89	WHE8900
1988	91	WHE8900
1989	93	WHE9001
1990	87	WHE9100
1991	90	WHE9202
1992	100	WHE9301

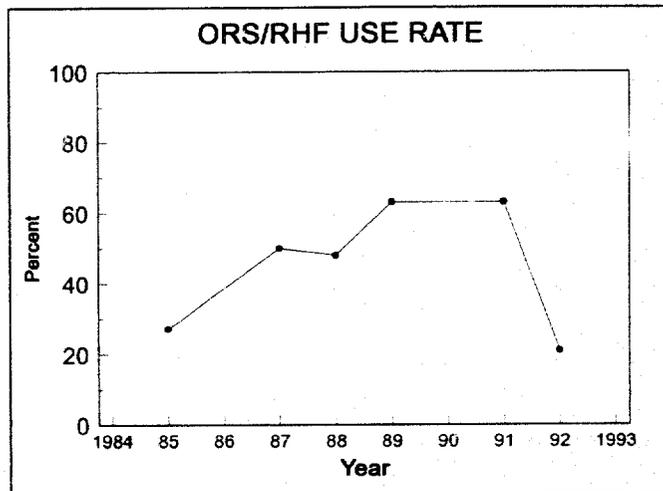
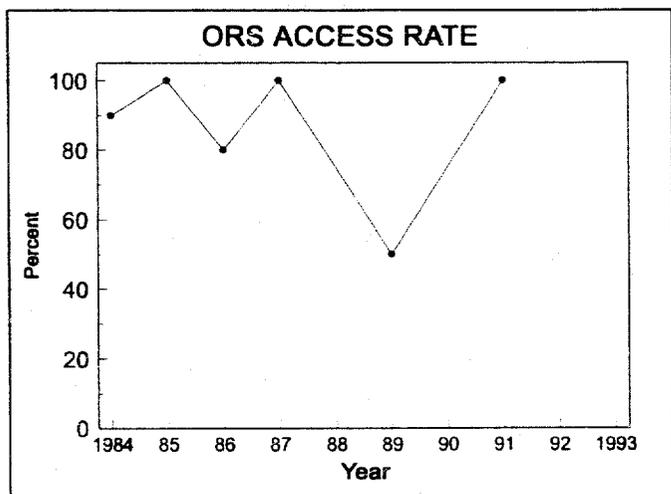


TT2+ COVERAGE		
YEAR	PERCENT	SOURCE
1980	2	WHE8700
1981	2	WHE8700
1982	2	WHE8700
1983	NA	
1984	NA	
1985	7	WHE8700
1986	12	WHE8800
1987	27	WHE8900
1988	46	WHE9000
1989	32	WHE9001
1990	38	WHE9100
1991	33	WHE9202
1992	48	WHE9301



## ORS Access, ORS and/or RHF Use Rates

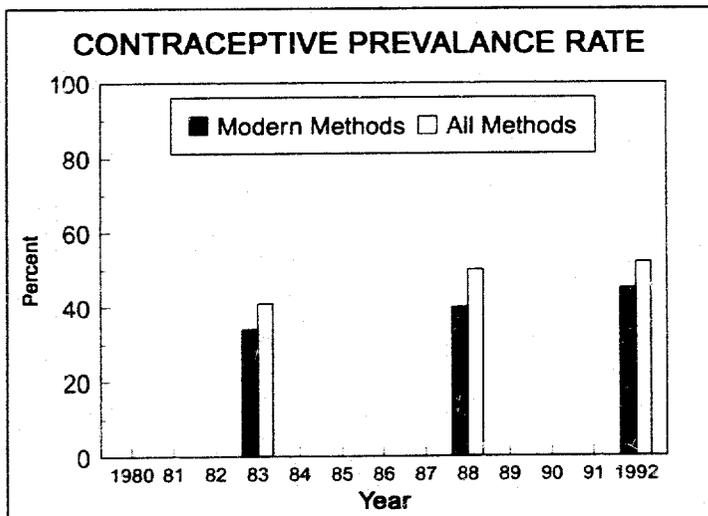
JULY 1994



INDICATOR	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
ORS Access	90	100	80	100	NA	50	NA	100	NA	NA
Source	WHD8700	WHD8700	WHD8800	WHD8900		WHD9100		WHD9201		
ORS/RHF Use	NA	27	NA	50	48	63	NA	63	21	NA
Source		WHD8700		WHD8900	WHD9000	WHD9100		WHD9201	WHD9300	

## Contraceptive Prevalence Rate

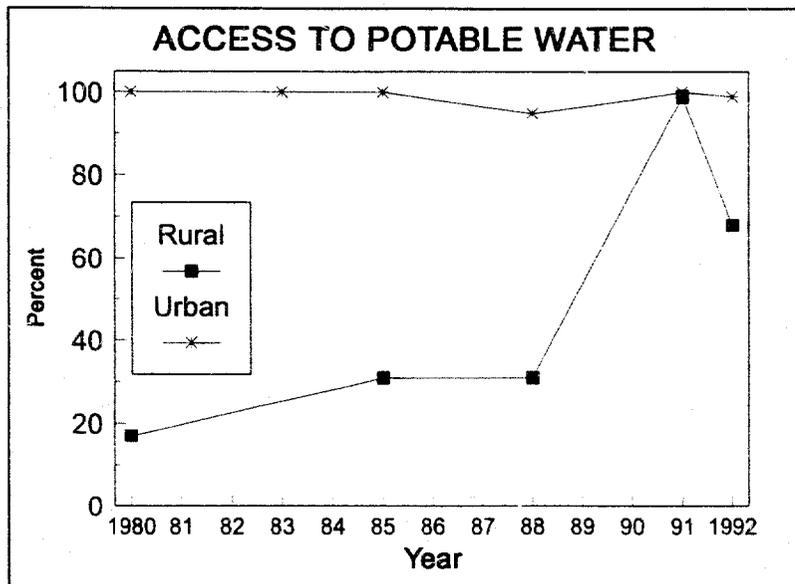
JULY 1994



YEAR	MODERN METHODS	SOURCE	ALL METHODS	SOURCE
1980	NA		NA	
1981	NA		NA	
1982	NA		NA	
1983	34	BUC9401	41	BUC9401
1984	NA		NA	
1985	NA		NA	
1986	NA		NA	
1987	NA		NA	
1988	40	DHS8914	50	DHS8914
1989	NA		NA	
1990	NA		NA	
1991	NA		NA	
1992	45	MRF9220	52	MRF9220
1993	NA		NA	

## Access to Potable Water

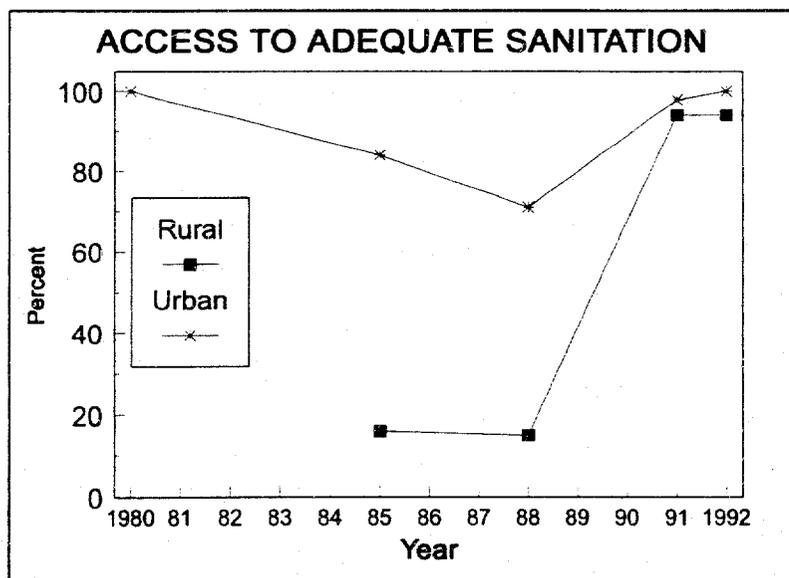
JULY 1994



YEAR	RURAL SOURCE	URBAN SOURCE
1980	17 WHO9101	100 WHO9101
1981	NA	NA
1982	NA	NA
1983	NA	100 WHO9101
1984	NA	NA
1985	31 WHO9101	100 WHO9101
1986	NA	NA
1987	NA	NA
1988	31 WHO9101	95 WHO9101
1989	NA	NA
1990	NA	NA
1991	99 JMP9301	100 JMP9301
1992	68 MRF9221	99 MRF9221
1993	NA	NA

## Access to Adequate Sanitation

JULY 1994

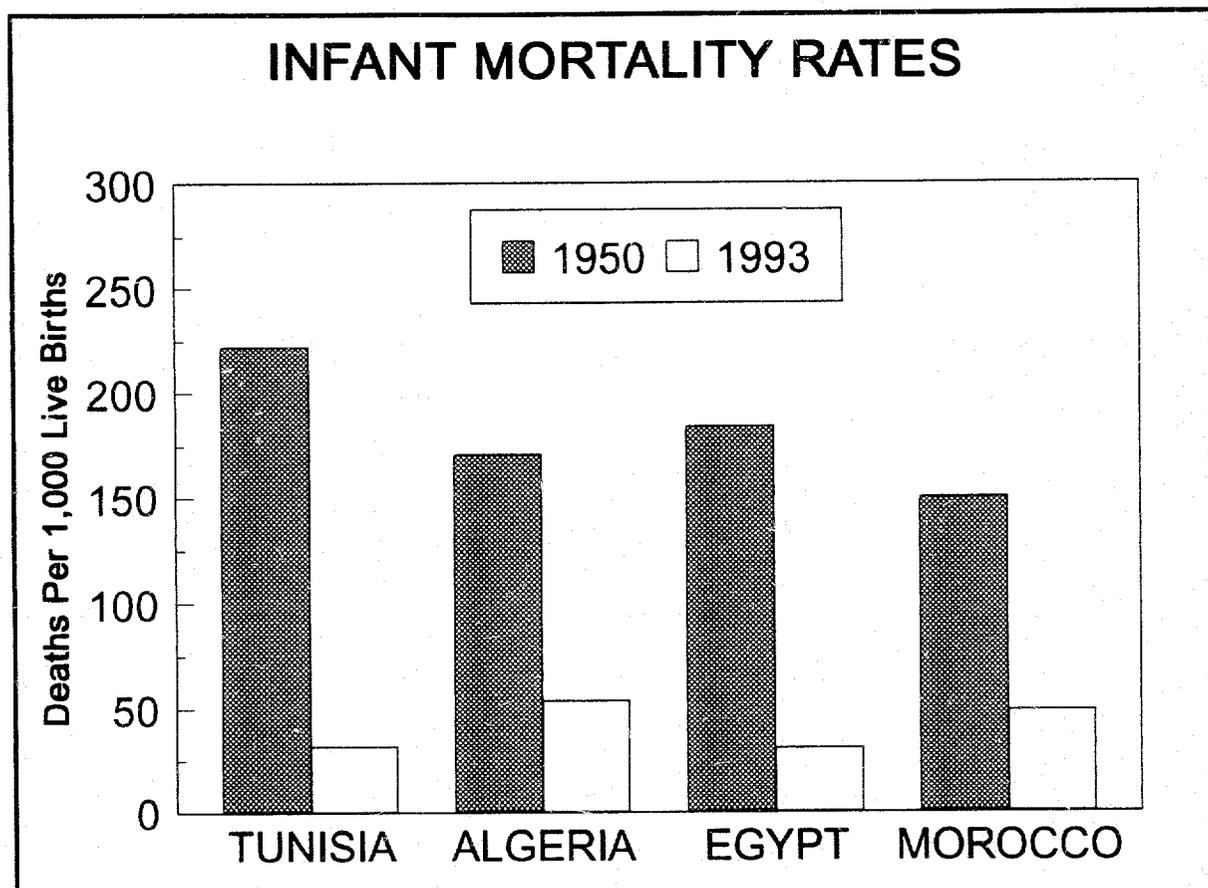


YEAR	RURAL SOURCE	URBAN SOURCE
1980	NA	100 WHO9101
1981	NA	NA
1982	NA	NA
1983	NA	NA
1984	NA	NA
1985	16 WHO9101	84 WHO9101
1986	NA	NA
1987	NA	NA
1988	15 WHO9101	71 WHO9101
1989	NA	NA
1990	NA	NA
1991	94 JMP9301	98 JMP9301
1992	94 MRF9221	100 MRF9221
1993	NA	NA

## COMPARATIVE INDICATORS

### Comparative IMR Rates

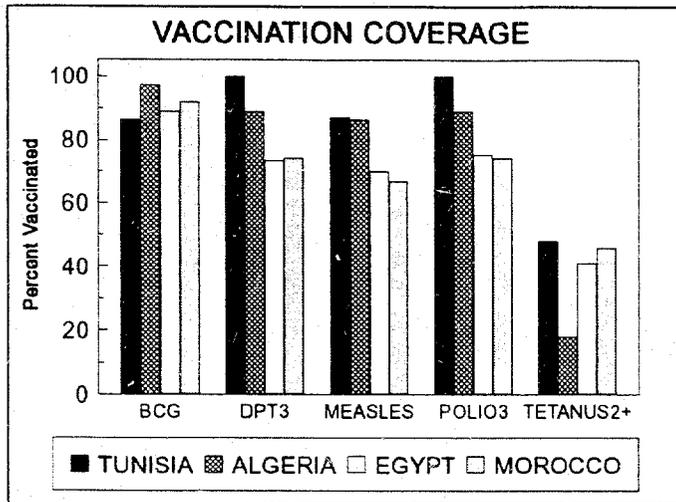
JULY 1994



COUNTRY	1950	SOURCE	1993	SOURCE
TUNISIA	222	WBK9302	32	WBK9302
ALGERIA	171	BUC9302	54	BUC9302
EGYPT	184	WBK9302	31	WBK9302
MOROCCO	150	WBK9302	49	WBK9302

### Comparative Vaccination Coverage Rates

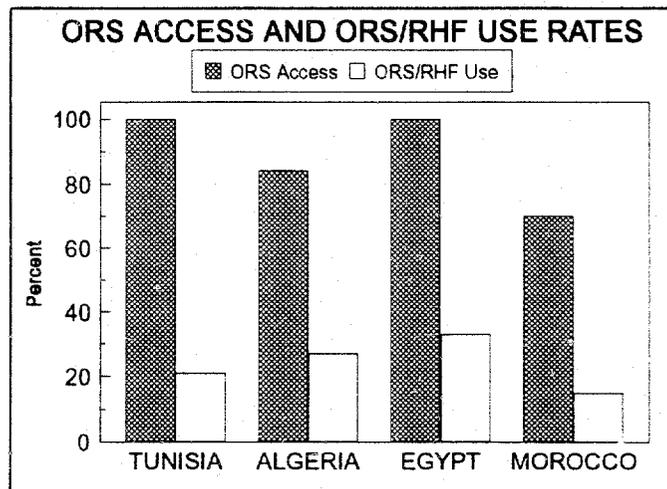
JULY 1994



COUNTRY	INDICATOR	YEAR	VALUE	SOURCE
TUNISIA	BCG	1992	86	WHE9301
	DPT 3	1992	100	WHE9301
	Measles	1992	87	WHE9301
	Polio 3	1992	100	WHE9301
	Tetanus 2	1992	48	WHE9301
ALGERIA	BCG	1992	97	WHE9301
	DPT 3	1992	89	WHE9301
	Measles	1992	86	WHE9301
	Polio 3	1992	89	WHE9301
	Tetanus 2	1992	18	WHE9301
EGYPT	BCG	1992	89	DHS9308
	DPT 3	1992	73	DHS9308
	Measles	1992	70	DHS9308
	Polio 3	1992	75	DHS9308
	Tetanus 2	1992	41	DHS9308
MOROCCO	BCG	1992	92	DHS9310
	DPT 3	1992	74	DHS9310
	Measles	1992	67	DHS9310
	Polio 3	1992	74	DHS9310
	Tetanus 2	1992	46	DHS9310

### Comparative ORS Access, ORS and/or RHF Use Rates

JULY 1994



COUNTRY	INDICATOR	YEAR	VALUE	SOURCE
TUNISIA	ORS Access Rate	1991	100	WHD9201
	ORT Use Rate	1992	21	WHD9300
ALGERIA	ORS Access Rate	1992	84	WHD9300
	ORT Use Rate	1992	27	WHD9300
EGYPT	ORS Access Rate	1993	100	WHD9401
	ORT Use Rate	1992	33	DHS9211
MOROCCO	ORS Access Rate	1993	70	WHD9401
	ORT Use Rate	1992	15	DHS9204

## II: DATA NOTES

JULY 1994

### *Notes On Mortality Estimation*

Throughout this profile, references are made to infant and under 5 mortality rates for individual countries or groups of countries. In past years, the primary source of data on infant mortality was the World Population Prospects, a set of estimates updated every two years by the Estimates and Projections Section of the Population Division of the Department of International Economic and Social Affairs, United Nations. The primary source of data on under 5 mortality was a special report published in 1988 by the same group. Where another source, such as a recent Demographic and Health Survey or a national census, was available for a given country, the reported values from that source were cited in place of the United Nations estimates if the technical staff of USAID in the Country Mission and/or the appropriate regional bureaus confirmed the validity of the alternative source.

Known as indirect estimates, those of the United Nations are generated from accepted demographic models which combine the results of all available surveys and censuses in a given country to produce a single time series of estimates and projections. When new empirical data becomes available for a given country, the entire time series of estimates and projections is updated. Thus, using conventional demographic approaches, a survey done in 1990 may generate a new estimate of a mortality rate for 1970 or 1980.

During 1993, a new set of estimates for mortality was generated for 82 countries for publication in the World

Development Report 1993 and a forthcoming UNICEF publication entitled The Progress of Nations. Based on a curve-fitting model, the methodology applied to generate these new estimates purports to depict more accurately the trend derived from all available data sources for a country. Like the estimates generated using conventional demographic models, the entire time series might change upon the addition of a new empirical source. These estimates were made available to USAID through the courtesy of the World Development Report of the World Bank and UNICEF.

The selection of the mortality rates was done through a consultative process involving representatives of the Office of Health in USAID's Research and Development Bureau, USAID's Regional Bureaus and, in many cases, the USAID Country Missions. The source determined to best reflect the reality in a country for the current values of infant and under 5 mortality was identified and one of a number of a computation procedures, depending on the source selected for the current value, was applied to estimate the longitudinal rates. The consideration of the additional source of data developed for the World Development Report and UNICEF during the consultative process has prompted some changes in the reporting of mortality rates from those reported in recent years.

### *Definitions*

#### *Demographic Indicators*

**Total Population:** The mid-year estimate of the total number of individuals in a country.

**Average Annual Rate of Growth:** An estimate of the rate at which a population is increasing (or decreasing) in a given year.

**Infant Mortality Rate:** The estimated number of deaths in infants (children under age one) in a given year per 1,000 live births in that same year. This rate may be calculated by direct methods (counting births and deaths) or by indirect methods (applying well-established demographic models).

**Under 5 Mortality Rate:** The estimated number of children born in a given year who will die before reaching age five per thousand live births in that same year. This rate may also be calculated by direct or indirect methods.

**Maternal Mortality Ratio:** The estimated number of maternal deaths per 100,000 live births where a maternal death is one which occurs when a woman is pregnant or within 42 days of termination of pregnancy from any cause related to or aggravated by the pregnancy or its management. Although sometimes referred to as a rate, this measure is actually a ratio because the unit of measurement of the numerator (maternal deaths) is different than that of the denominator (live births). The measure would be a rate if the units were the same. Extremely difficult to measure, maternal mortality can be derived from vital registration systems (usually underestimated), community studies and surveys (requires very large sample sizes) or hospital registration (usually overestimated).

**Crude Birth Rate:** An estimate of the number of live births per 1,000 population in a given year.

**Crude Death Rate:** An estimate of the number of deaths per 1,000 population in a given year.

**Life Expectancy At Birth:** An estimate of the average number of years a newborn can expect to live. Life expectancy is computed from age-specific death rates for a given year. It should be noted that low life expectancies in developing countries are, in large part, due to high infant mortality.

**Number of Births:** An estimate of the number of births occurring in a given year.

**Annual Infant Deaths:** An estimate of the number of deaths occurring to children under age one in a given year.

**Total Fertility Rate:** An estimate of the average number of children a woman would bear during her lifetime given current age-specific fertility rates.

### *Child Survival Indicators*

**Vaccination Coverage In Children:** An estimate of the proportion of living children between the ages of 12 and 23 months who have been vaccinated before their first birthday--three times in the cases of polio and DPT and once for both measles and BCG. Vaccination coverage rates are calculated in two ways. Administrative estimates are based on reports of the number of inoculations of an antigen given during a year to children who have not yet reached their first birthday divided by an estimate of the pool of children under one year of age eligible for vaccination. Survey estimates are based on samples of children between the ages of 12 and 23 months.

**Vaccination Coverage In Mothers:** An estimate of the proportion of women in a given time period who have received two doses of tetanus toxoid during their pregnancies. This indicator is being changed in many countries to account for the cumulative effect of tetanus toxoid boosters. A woman and her baby are protected against tetanus when a mother has

had only one or, perhaps, no boosters during a given pregnancy so long as the woman had received the appropriate number of boosters in the years preceding the pregnancy in question. (The appropriate number of boosters required during any given pregnancy varies with number received previously and the time elapsed.) The revised indicator is referred to as TT2+. Rates are computed using administrative methods or surveys.

**DPT Drop-out Rate:** An estimate of the proportion of living children between the ages of 12 and 23 months who received at least one DPT vaccination but who did not receive the entire series of three vaccinations before their first birthdays.

**Oral Rehydration Salts (ORS) Access Rate:** An estimate of the proportion of the population under age five with reasonable access to a trained provider of oral rehydration salts who receives adequate supplies. This is a particularly difficult indicator to measure and, therefore, it may fluctuate dramatically from year to year as improved methods of estimation are devised.

**ORS and/or Recommended Home Fluid (RHF) Use Rate:** An estimate of the proportion of all cases of diarrhea in children under age five treated with ORS and/or a recommended home fluid. ORT use may be determined using administrative means or surveys. In general, administrative estimates are based on estimates of the number of episodes of diarrhea in the target population for a given year and the quantity of ORS available. Thus, changes in the estimates of the frequency of diarrhea episodes can alter the ORT use rate as well as "real" changes in the pattern of use. Surveys are more precise in that they focus on the actual behavior of mothers in treating diarrhea in the two-week period prior to the survey.

**Contraceptive Prevalence Rate:** An estimate of the proportion of women, aged 15 through 44 (or, in some countries, 15 through 49), in union or married, currently using a modern method of contraception. Where sources fail to distinguish modern and traditional methods, the combined rate is shown.

**Adequate Nutritional Status:** An individual child of a certain age is said to be adequately nourished if his/her weight is greater than the weight corresponding to "two Z-scores" (two standard deviations) below the median weight achieved by children of that age. The median weight and the distribution of weights around that median in a healthy population are taken from a standard established by the National Center for Health Statistics, endorsed by the World Health Organization (WHO). The indicator for the population as a whole is the proportion of children 12 through 23 months of age who are adequately nourished.

**Appropriate Infant Feeding:** A composite estimate of the proportion of infants (children under age one) being breastfed and receiving other foods at an appropriate age according to the following criteria: breastfed through infancy with no bottle-feeding, exclusively breastfed through four months (120 days) of age, and receiving other foods if over six months of age (181 days). Water is not acceptable in the first four months (120 days). ORS is considered acceptable at any age. Surveys are the only source of data to form this indicator. Surveys yield an estimate of how many infants are being fed correctly at the moment of the survey. They do not give an indication of the proportion of individual children fed appropriately throughout their first year of life. A number of sub-indicators may be calculated from the data used to form the composite, of which two are presented in this report.



**Exclusive Breastfeeding:** An estimate of the proportion of infants less than four months (120 days) of age who receive no foods or liquids other than breast milk.

**Complementary Feeding:** An estimate of the proportion of infants six to nine months of age (181 days to 299 days) still breastfeeding but also receiving complementary weaning foods.

**Continued Breastfeeding:** An estimate of the proportion of children breastfed for at least one year. In this report, all values presented for this indicator are the proportion of children 12 to 15 months of age at the time of the survey still receiving breast milk.

sanitation service provided through sewer systems or individual in-house or in-compound excreta disposal facilities (latrines).

**Access to Sanitation, Rural:** An estimate of the proportion of all persons not living in urban areas with sanitation coverage provided through individual in-house or in-compound excreta disposal facilities (latrines).

**Deliveries By Trained Attendants:** An estimate of the proportion of deliveries attended by at least one physician, nurse, midwife, or trained traditional birth attendant.

#### *Other Health Indicators*

**HIV-1 Seroprevalence, Urban:** An estimate of the proportion of all persons (pregnant women, blood donors, and other persons with no known risk factors) living in urban areas infected with HIV-1, the most virulent and globally prevalent strain of the human immunodeficiency virus.

**HIV-1 Seroprevalence, Rural:** An estimate of the proportion of all persons living in rural areas infected with HIV-1.

**Access to Improved Water, Urban:** An estimate of the proportion of all persons living in urban areas (defined roughly as population centers of 2,000 or more persons) who live within 200 meters of a stand pipe or fountain source of water.

**Access to Improved Water, Rural:** An estimate of the proportion of all persons not living in urban areas with a source of water close enough to home that family members do not spend a disproportionate amount of time fetching water.

**Access to Sanitation, Urban:** An estimate of the proportion of all persons living in urban areas with

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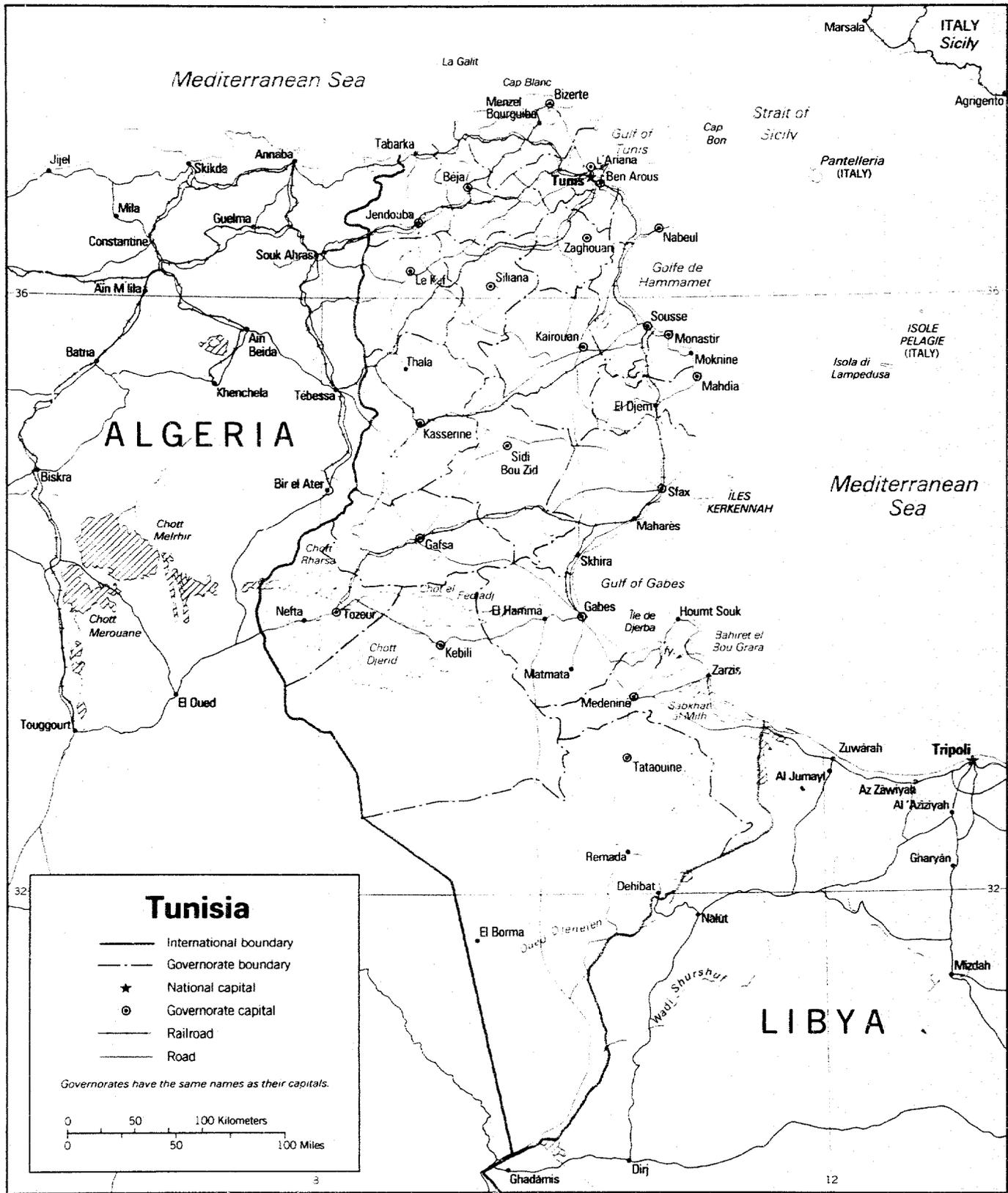


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