

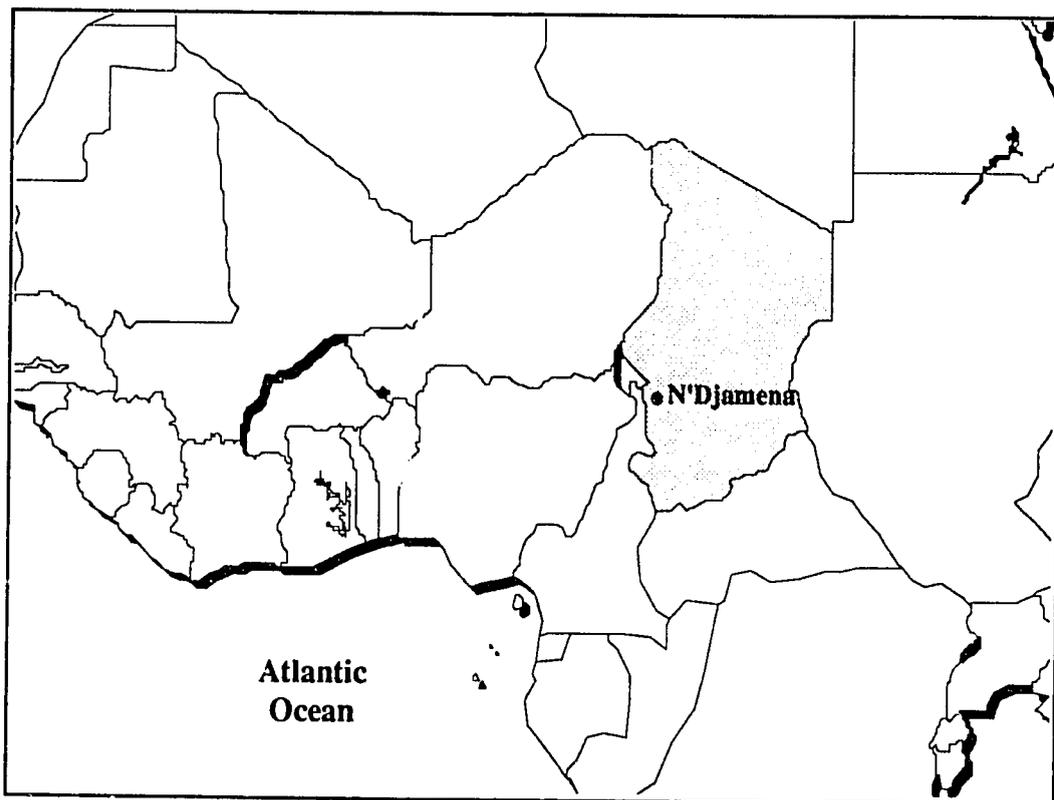
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# Chad

## USAID Health Profile Abbreviated Version

October 1992

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The Center for International Health Information, a division of ISTI, operates the USAID Health Information System under the Child Survival Action Program-Support project, #936-5951.13, contract number DPE 5951-Z-00-8004-00 with the Office of Health, Bureau for Research and Development, U.S. Agency for International Development.

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# CHAD

## USAID Health Profile

### Abbreviated Version

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This is one of a series of USAID Health Profiles published by ISTI's Center for International Health Information (CIHI). Each Health Profile contains a collection of tables, graphs and summary descriptions about the health and demographic conditions and activities in a country, including descriptions of USAID-supported activities in that country when available. While some of the information comes from the Center's databases, succinct reports from other publications are also included when available.

The USAID Health Profiles are intended to provide current and trend data in a concise format to evaluation teams, consultants and other interested individuals. They are not intended to provide a comprehensive description of the total health sector of a country. Contact the Center for information on the availability of other Health Profiles and Standard Reports.

This profile contains national level health and demographic statistics available in the Center's databases as of the above date. In order to enable the Center to report the most current health and demographic statistics, please provide any more recent or more accurate data by contacting us at the address below or through USAID, Bureau of Research and Development, Office of Health.



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**CHAD**  
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**October 1992**

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August, 1992

USAID HEALTH INFORMATION SYSTEM  
 Managed By The  
 CENTER FOR INTERNATIONAL HEALTH INFORMATION/ISTI

CHAD

	Value	Year	Source
<u>Demographic Indicators</u>			
Total Population	5,986,000	1992	A
Infant Mortality Rate	123	1992	A
Under 5 Mortality	207	1992	B
Maternal Mortality	858	1972	H
Life Expectancy At Birth	47	1992	A
Children Under Age 1	237,400	1992	A
Annual Infant Deaths	32,000	1992	A
Total Fertility Rate	5.8	1992	A
<u>Child Survival Indicators</u>			
Vaccination Coverage			
BCG	59.0%	1990	C
DPT 3	20.0%	1990	C
Measles	32.0%	1990	C
Polio 3	20.0%	1990	C
Tetanus 2	33.0%	1990	C
DPT Drop Out	N/A		
Oral Rehydration Therapy			
ORS Access Rate	24.0%	1991	D
ORT Use Rate	15.0%	1991	D
Contraceptive Prevalence			
Modern Methods (15-44)	1.0%	1977	E
All Methods	N/A		
Nutrition			
Adequate Nutritional Status	N/A		
Appropriate Infant Feeding			
a) Exclusive Breastfeeding	N/A		
b) Complementary Feeding	N/A		
Continued Breastfeeding	N/A		
<u>Other Health Indicators</u>			
HIV-1 Seroprevalence			
Urban	1.1%	1991	F
Rural	0.5%	1991	F
Access To Improved Water			
Urban	N/A		
Rural	N/A		
Access To Sanitation			
Urban	N/A		
Rural	N/A		
Deliveries/ Trained Attendants	24.0%	1980	G

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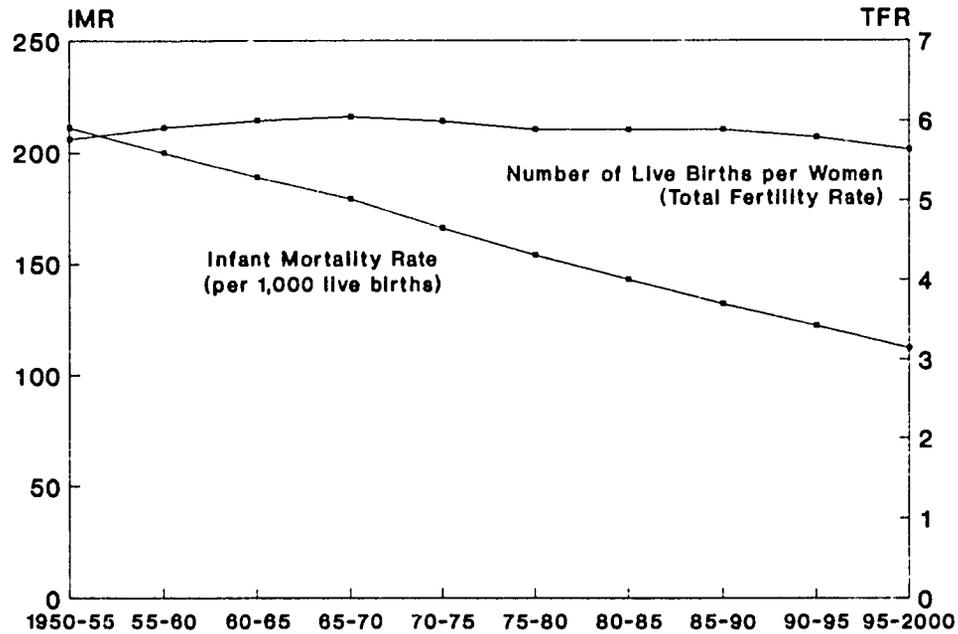
SOURCES FOR CHAD

- A Department of International Economic and Social Affairs, United Nations. World Population Prospects 1990. (ST/ESA/SER.A/120) New York: UN, 1991.
- B Department of International Economic and Social Affairs, United Nations. Mortality of children under age five: World Estimates and Projections, 1950-2025. (ST/ESA/SER.A/105) New York: United Nations, 1988.
- C World Health Organization. Expanded Programme on Immunization Information System Report, April 1992. (WHO/EPI/CEIS/92.1) Geneva: WHO, 1992.
- D World Health Organization, Programme for Control of Diarrhoeal Diseases provisional data as cited in WHO/CDD facsimile, February 1992.
- E International Planned Parenthood Federation nationwide survey of family planning needs as cited in U.S. Bureau of the Census. U.S. Department of Commerce. World Population Profile: 1989. Washington D.C.: U.S. Government Printing Office, 1989.
- F Bureau of Census, Center for International Research, Recent HIV Seroprevalence Levels By Country, April, 1992
- G World Health Organization. African Regional Office. Evaluation of the strategy for the health for all by the year 2000. Seventh report on the world health situation. Vol 2. Brazzaville 1987  
as cited in Division of Family Health, World Health Organization. Maternal Mortality: A Global Factbook. (WHO/MCH/MSM/91.3) Geneva: World Health Organization, 1991.
- H Chad, Ministry of Public Health and Social Affairs, Department of Public Health, as cited in Division of Family Health, World Health Organization. Maternal Mortality: A Global Factbook. (WHO/MCH/MSM/91.3) Geneva: World Health Organization, 1991.

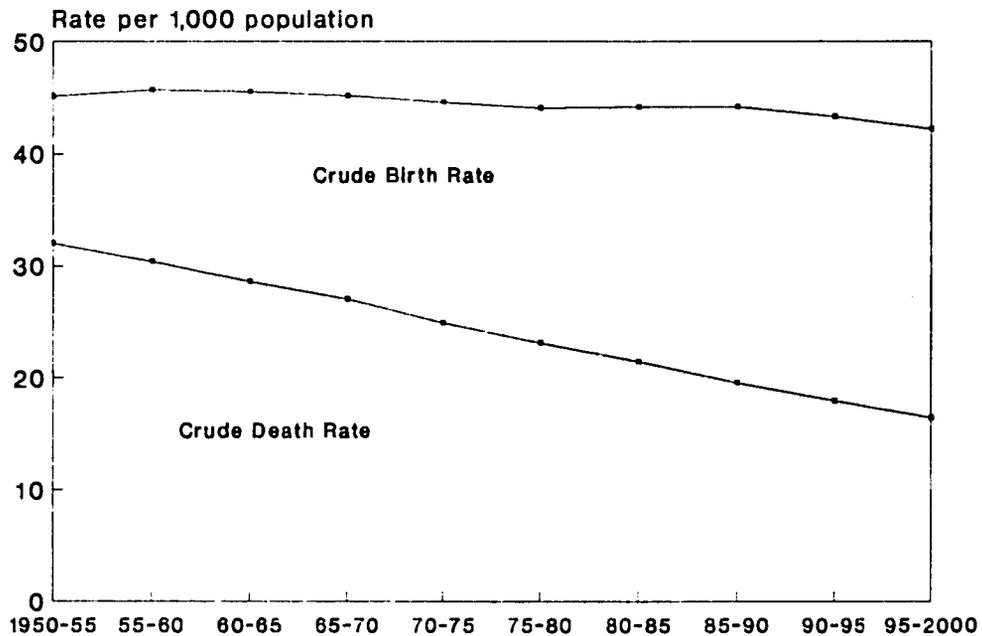
**Trends: Selected Demographic Indicators  
Chad: 1950-2000**

	1950	1955	1960	1965	1970	1975	1980	1985	1990	1995	2000
<b>Total Population (000)</b>											
UN/POP/1990	2,658	2,838	3,064	3,334	3,652	4,030	4,477	5,018	5,678	6,447	7,337
BUCEN/1990	1,260		1,467		1,827		2,259		2,877		3,702
	1950-55	1955-60	1960-65	1965-70	1970-75	1975-80	1980-85	1985-90	1990-95	1995-00	
<b>Infant Mortality Rate</b>											
UN/POP/1990	211.1	200.0	189.4	179.4	166.5	154.3	142.8	132.0	122.0	112.0	
<b>Under 5 Mortality Rate</b>											
UN/POP/105	352.0	334.0	318.0	302.0	281.0	261.0	241.0	223.0	205.0	186.0	
<b>Total Fertility Rate</b>											
UN/POP/1990	5.8	5.9	6.0	6.0	6.0	5.9	5.9	5.9	5.8	5.6	
<b>No. Of Births Per Year (000)</b>											
UN/POP/1990	124	135	146	158	171	187	210	236	262	291	
<b>Annual Infant Deaths (000)</b>											
UN/POP/1990	88	90	92	94	96	98	102	104	109	113	
<b>Crude Birth Rate</b>											
UN/POP/1990	45.1	45.7	45.5	45.2	44.6	44.1	44.2	44.2	43.3	42.2	
<b>Crude Death Rate</b>											
UN/POP/1990	32.0	30.4	28.6	27.0	24.9	23.1	21.4	19.5	17.9	16.4	

## The Demographic Transition in Chad 1950-2000



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.



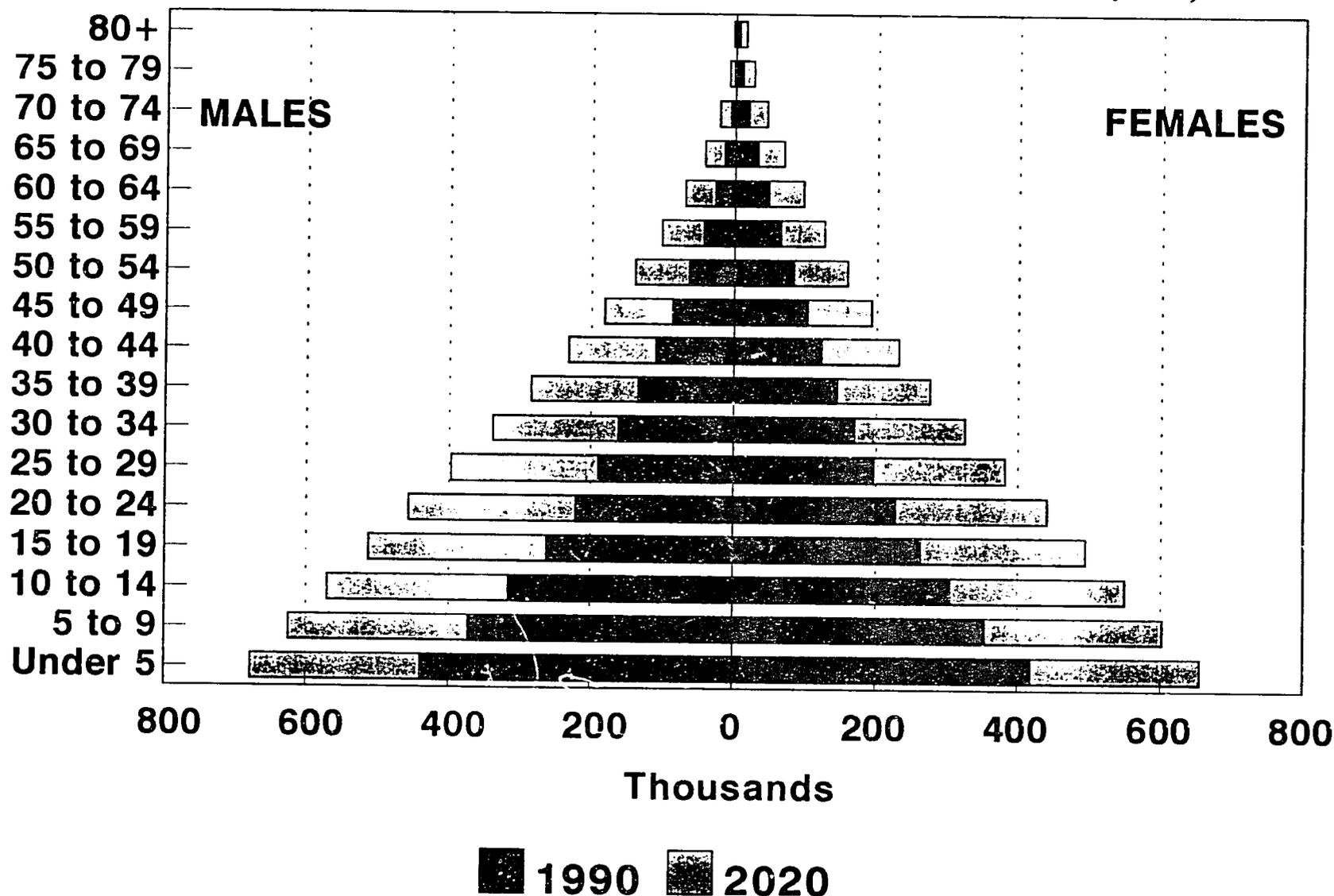
Source: UN/POP/1990

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# Current and Projected Population by Age and Gender in Chad: 1990 - 2020

Total Population: FY 1990: 5,017,431; FY 2020: 9,360,704



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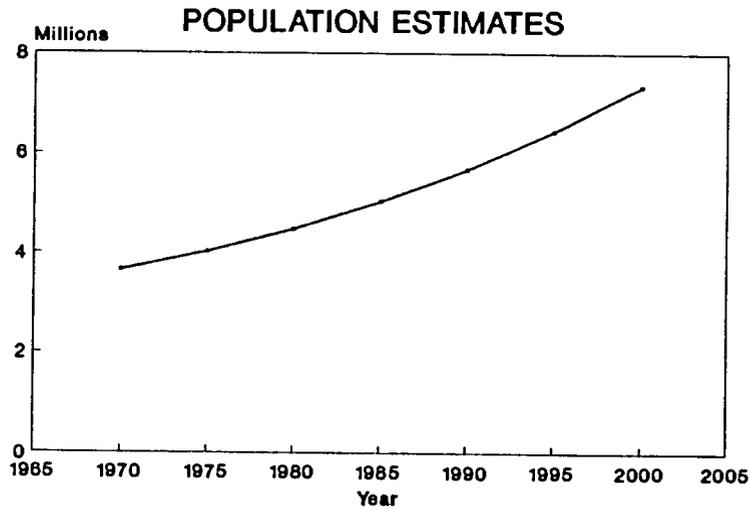
## Trends: Selected Health and Child Survival Indicators

**Chad: 1980-1991**

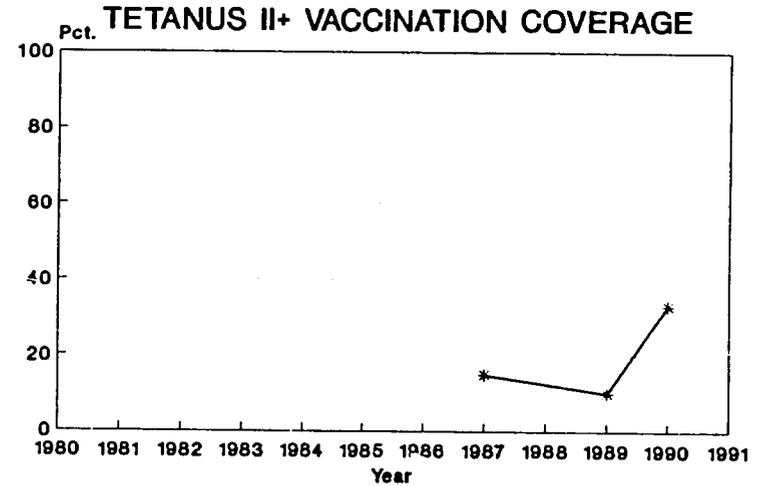
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
<b>Vaccination Coverage</b>												
WHO/EPI/CEIS 87-92; MOPH, 1989 cited in FY90 MRF												
a. BCG.....	--	--	--	--	--	--	--	31.0	--	59.0	59.0	--
b. DPT 3.....	--	--	--	1.0	--	--	10.0	13.0	--	22.0	20.0	--
c. Measles.....	--	--	--	--	--	--	--	16.0	--	34.0	32.0	--
d. Polio 3.....	--	--	--	--	--	--	--	13.0	--	21.5	20.0	--
e. Tetanus 2.....	--	--	--	--	--	--	--	15.0	--	10.0	33.0	--
<b>ORS Access and ORT Use</b>												
WHO/CDD/87-92												
a. ORS Access.....	--	--	--	--	10.0	--	18.0	23.7	22.0	28.0	--	24.0
b. ORT Use.....	--	--	--	--	--	7.0	2.3	--	2.0	10.0	--	15.0
<b>Contraceptive Prevalence (15-49)</b>												
a. All Methods.....	--	--	--	--	--	--	--	--	--	--	--	--
b. Modern Methods.....	--	--	--	--	--	--	--	--	--	--	--	--
<b>Nutrition and Infant Feeding</b>												
a. Adequate Nutritional Status.....	--	--	--	--	--	--	--	--	--	--	--	--
b. Appropriate Infant Feeding.....	--	--	--	--	--	--	--	--	--	--	--	--
c. Exclusively Breastfed.....	--	--	--	--	--	--	--	--	--	--	--	--
d. Complementary Feeding.....	--	--	--	--	--	--	--	--	--	--	--	--
e. Continued Breastfeeding....	--	--	--	--	--	--	--	--	--	--	--	--
<b>Water Supply Coverage (% Served)</b>												
a. Urban Areas.....	--	--	--	--	--	--	--	--	--	--	--	--
b. Rural Areas.....	--	--	--	--	--	--	--	--	--	--	--	--
<b>Adequate Sanitation Coverage (% Served)</b>												
a. Urban Areas.....	--	--	--	--	--	--	--	--	--	--	--	--
b. Rural Areas.....	--	--	--	--	--	--	--	--	--	--	--	--

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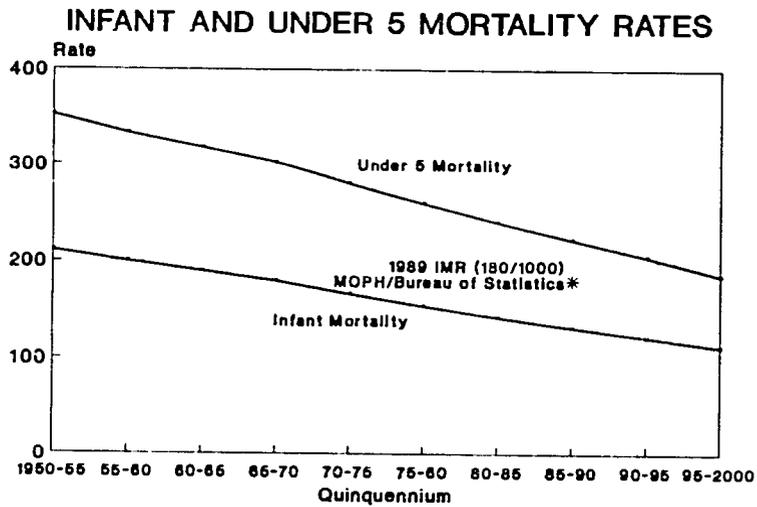
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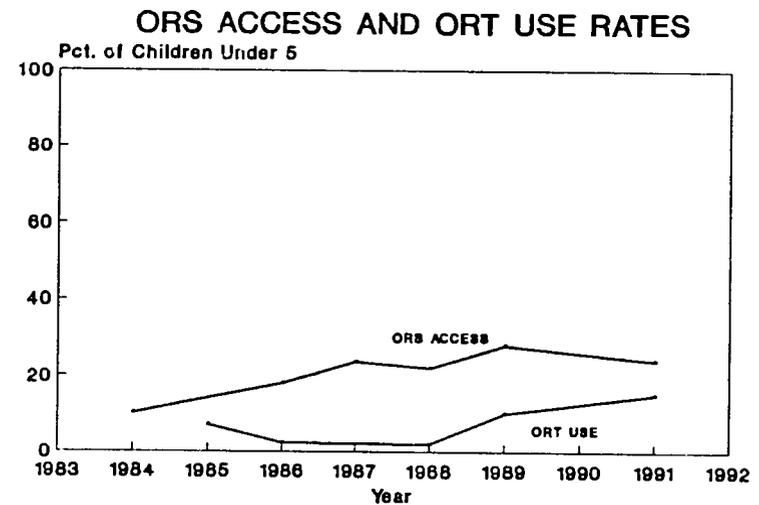
SOURCE: United Nations, World Population Prospects, 1990



SOURCE: World Health Organization Annual Reports of the EPI Programme; Chad MOPH/Bureau of Statistics 1989

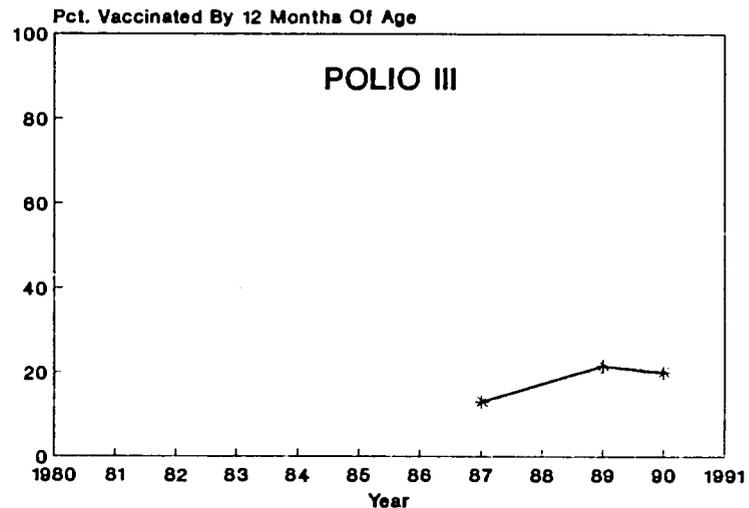
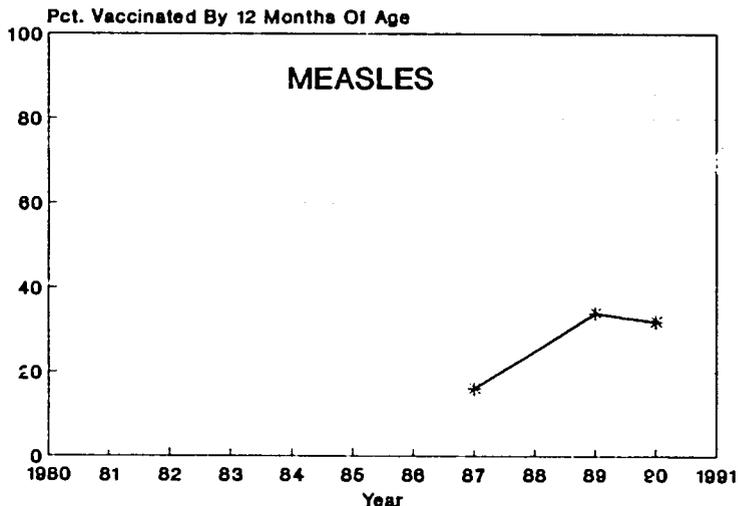
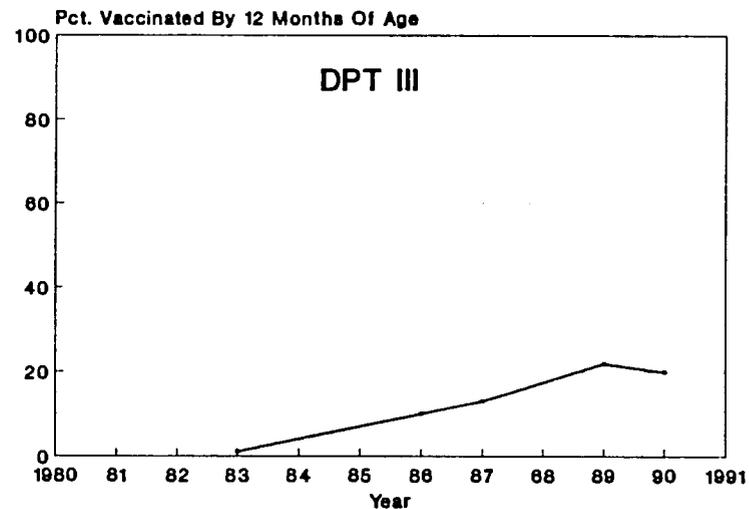
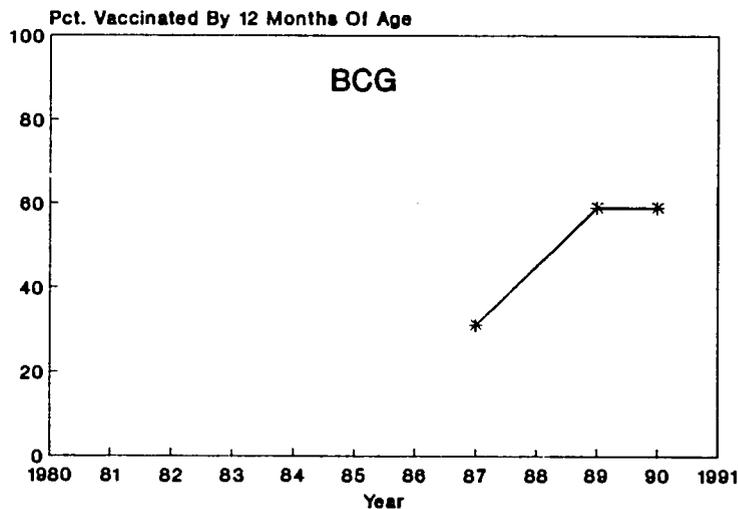


SOURCE: United Nations; 1 World Population Prospects, '90, and 2 Mortality of Children Under Age 5 (89)



SOURCE: World Health Organization, Reports of the Programme for Control of Diarrhoeal Diseases

# VACCINATION COVERAGE RATES IN CHAD



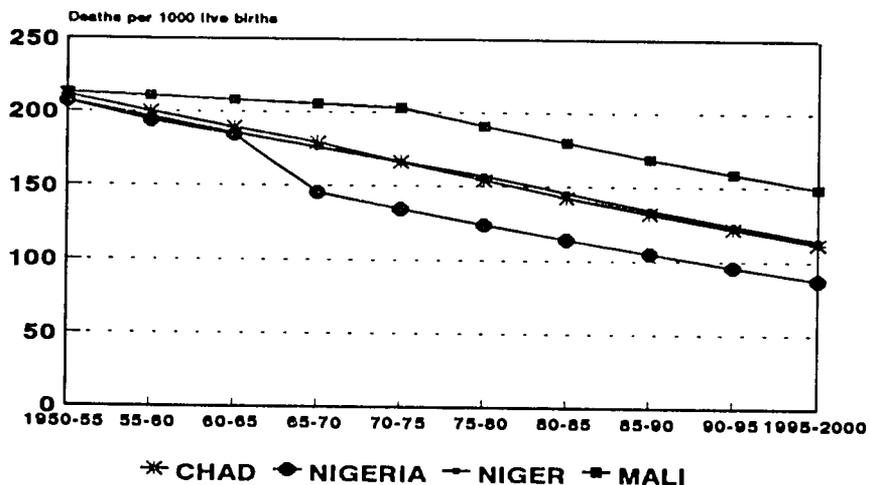
SOURCE: WHO, Annual Reports of the EPI Programme  
MOPH/Bureau of Statistics 1989 data (except BCG)

CIHI, ISTI; 7/92

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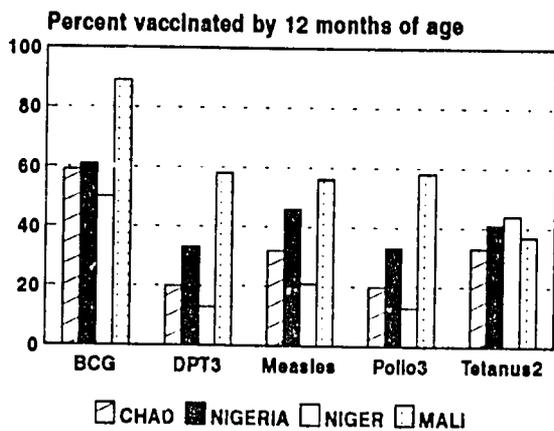
# COMPARATIVE INDICATORS: Chad and selected Neighbors

## Infant Mortality Rates



Source: UN/POP/90

## 1990 Vaccination Coverage Data

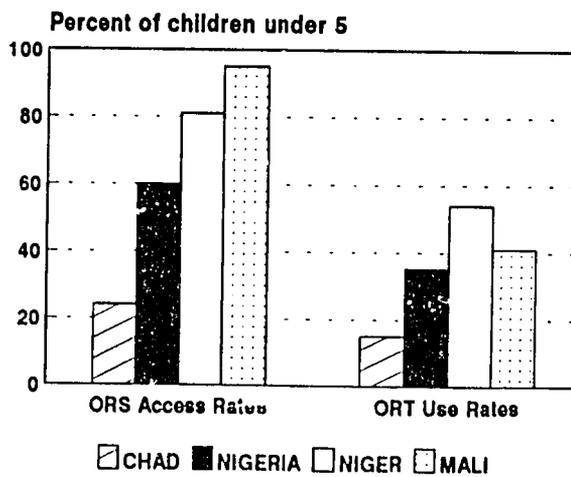


SOURCE: EPI/WHO

Rates for Nigeria are from the 1990 DHS.

Rates for Mali are from a national survey (FY 91 MRF) and are for 1991.

## 1991 ORS Access and ORT Use Rates



SOURCE: WHO/CDD

ORT use rate for Nigeria is from the 1990 DHS.

CIHI, ISTI; 10/92







**CHAD**  
**USAID Funded Health Projects**  
**Active During Fiscal Year 1991**

<b>Project Title</b>	<b>Project Number</b>	<b>U.S. Contractor/Grantee</b>
Program Development and Support (PD&S) Child Survival Project	6770060 6770064	Multiple N/A

N/A Contract not yet awarded.

*Contractor/Grantee information is taken from the Annual Health and Child Survival Questionnaires.  
See Data Notes.*

CIHI/ISTI, June 1992

**CHAD**  
**Fiscal Year Obligations for USAID–Funded**  
**Bilateral Projects Related to Health**  
**FY 1985 – FY 1993**  
**(\$000s)**

Project Title	Project Number	FY85	FY86	FY87	FY88	FY89	FY90	FY91	FY92	FY93
Small Project Assistance – –AID/PC	6770058	0	0	0	0	10	0	0	0	0
Program Development and Support (PD&S)	6770060	0	0	0	0	245	0	0	0	0
Child Survival Project	6770064	0	0	0	0	2,700	1,850	1,000	1,215	2,120
<del>NPA in the Health Sector</del>	6770066	0	0	0	0	0	0	0	650	0
Oral Rehydration Therapy	6770934	350	0	0	0	0	0	0	0	0
Sahel Policy Analysis Project	677SPAP	0	0	0	0	0	0	0	0	200
<b>Totals:</b>		<b>350</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,955</b>	<b>1,850</b>	<b>1,000</b>	<b>1,865</b>	<b>2,320</b>

*Funding is based on reported attributions for health, child survival and AIDS activities from all funding accounts, except Population account in FY85–91.  
FY 1985–91 funding figures are actual; figures for FY 1992–93 are planned obligations.  
See Data Notes*

CIHI/ISTI, June 1992

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## DATA NOTES AND SOURCES

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### Demographic Indicators

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

**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.

**Children Under Age 1:** The mid-year estimate of the total number of children under age one.

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

**Infant Mortality Rate (IMR):** The estimated number of deaths in infants (children under age one) in a given year per 1,000 live births in that same year. An IMR 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. The under 5 mortality 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).

**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

**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 (ORS) who receives adequate supplies. This is a particularly difficult indicator to measure; therefore, it may fluctuate dramatically from year to year as improved methods of estimation are devised.

**ORT 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. Oral rehydration therapy (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.

**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 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.

The breastfeeding indicators listed below have been recalculated in 1992 from the original data sources according to the definitions developed by the WHO Working Group on Infant Feeding.

**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 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.

**Contraceptive Prevalence Rate:** An estimate of the proportion of women, aged 15 through 44, union or married, currently using a modern method of contraception unless otherwise noted.

**Vaccination Coverage in Children:** An estimate of the proportion of living children between the ages of 12 and 23 months who were vaccinated before their first birthday -- three times in the cases of polio and DPT (diphtheria, pertussis and tetanus) and once for both measles and BCG (tuberculosis). Vaccination coverage rates are calculated in two ways. Administrative estimates are based on reports of the number of vaccines administered divided by an estimate of the pool of children eligible for vaccination. Survey estimates are based on sample surveys of children in the target age group and may or may not include children without vaccination cards whose mothers recall that their children had been vaccinated.

**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. Currently under worldwide review, this indicator is being changed 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:** 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.

## Other Health Indicators

**Urban Water Supply Coverage:** 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.

**Rural Water Supply Coverage:** 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.

**Urban Adequate Sanitation Supply Coverage:** An estimate of the proportion of all persons living in urban areas with sanitation service provided through sewer systems, or individual in-house or in-compound excreta disposal facilities (latrines).

**Rural Adequate Sanitation Coverage:** 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).

**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.

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

### Sources and Comments

Each year, data on the child survival indicators are collected from USAID missions on the Mission Response Forms (referred to as MRF with the given year) disseminated along with the above mentioned questionnaires.

Another major source of information is the Demographic and Health Surveys (referred to as DHS with the year of the survey), Institute for Resource Development/Macro Systems, Inc.

Demographic Indicators - The primary, and unless otherwise noted, source for the demographic indicators is World Population Prospects: 1990 U.N. Tape #PRO206, (referred to as WPP) prepared by the Estimates and Projections Section of the Population Division of the Department of International Economic and Social Affairs, United Nations. The source for Under 5 Mortality data, unless otherwise noted, is Mortality of Children Under Age 5: World Estimates and Projections, 1950-2025, ST/ESA/SER.A/105, 1988 published by the same Section (also referred to as WPP).

Vaccination Coverage - The primary, and unless otherwise noted, sources for vaccination coverage data are the annual reports of the Expanded Programme on Immunization of WHO (referred to as WHO).

ORT - The primary, and unless otherwise noted, sources of data on ORT, both access and use, are the annual reports of the Diarrheal Disease Control Programme of WHO (referred to as WHO). An advanced copy of the indicators to be published in the next report was provided by that program. These data are provisional and subject to change.

Maternal Mortality and Deliveries by Trained Attendants - The primary, and unless otherwise noted, source of data on maternal mortality and on the percentage of deliveries performed by a trained attendant is the WHO Publication, Maternal Mortality: A Global Factbook (referred to as WHO/MCH/MSM/91.3.)

HIV/AIDS - All HIV seroprevalence data is drawn from the HIV/AIDS Surveillance Database, compiled by the Center for International Research, U.S. Department of Commerce Bureau of the Census. The reported prevalences are the results of the latest surveys in populations without special risk factors.

Water and Sanitation - Water and Sanitation data come primarily from two sources, a data diskette provided by the WHO (referred to as WHO Diskette, 10/29/91) and field reports of the USAID supported Water and Sanitation for Health project (referred to as WASH).

