

Country Health Profile

OMAN

Health Situation & Statistics Report 1994



Center for International Health Information
1601 N. Kent Street, Suite 1001
Arlington, VA 22209

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).

**The Center for International Health Information
1601 N. Kent Street, Suite 1001
Arlington, VA 22209
(703) 524 - 5225
FAX (703) 243 - 4669
E-Mail address: cihi@gaia.info.usaid.gov**

OMAN

Country Health Profile

This 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.

TABLE OF CONTENTS

JULY 1994

| | |
|---------------------------------------------------------|----|
| I: Health & Demographic Overview | 1 |
| Current Demographic and Health Indicators | 1 |
| Trends in Selected Demographic and Health Indicators | 2 |
| Population Estimates/Pyramid | 3 |
| Trends in Selected Health and Child Survival Indicators | 4 |
| Vaccination Coverage Rates | 4 |
| ORS Access, ORS and/or RHF Use Rates | 6 |
| Access to Potable Water | 7 |
| Access to Adequate Sanitation | 7 |
| Comparative Indicators | 8 |
| Comparative IMR Rates | 8 |
| Comparative Vaccination Coverage Rates | 9 |
| Comparative ORS Access, ORS and/or RHF Use Rates | 9 |
| II: Data Notes | 10 |
| III: Sources * | 13 |

** 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 | 1,702,800 | 1,993 | UNP9200 |
| Urban Population | 211,200 | 1993 | UNP9200 |
| Women Ages 15-49 | 338,800 | 1993 | UNP9200 |
| Infant Mortality | 38 | 1993 | BUC9300 |
| Under 5 Mortality | 50 | 1993 | BUC9300 |
| Maternal Mortality | NA | | |
| Life Expectancy At Birth | 70 | 1993 | UNP9200 |
| Number of Births | 68,671 | 1993 | UNP9200 |
| Annual Infant Deaths | 2,638 | 1993 | CALXX01 |
| Total Fertility Rate | 6.7 | 1993 | UNP9200 |

| Child Survival Indicators | | | |
|----------------------------------|---------|------|---------|
| INDICATOR | PERCENT | YEAR | SOURCE |
| Vaccination Coverage | | | |
| BCG | 99 | 1993 | WHE9401 |
| DPT 3 | 96 | 1993 | WHE9401 |
| Measles | 94 | 1993 | WHE9401 |
| Polio 3 | 96 | 1993 | WHE9401 |
| Tetanus 2 | 73 | 1992 | WHE9301 |
| DPT Drop Out | NA | | |
| Oral Rehydration Therapy | | | |
| ORS Access Rate | 95 | 1993 | WHD9401 |
| ORS and/or RHF Use | 72 | 1993 | WHD9401 |
| Contraceptive Prevalence | | | |
| Modern Methods (15-44) | NA | | |
| All Methods (15-44) | NA | | |
| Nutrition | | | |
| Adequate Nutritional Status | NA | | |
| Appropriate Infant Feeding | NA | | |
| A) Exclusive Breastfeeding | NA | | |
| B) Complementary Feeding | NA | | |
| Continued Breastfeeding | NA | | |

| Other Health Indicators | | | |
|--------------------------------------|---------|------|---------|
| INDICATOR | PERCENT | YEAR | SOURCE |
| HIV-1 Seroprevalence | | | |
| Urban | NA | | |
| Rural | NA | | |
| Access to Improved Water | | | |
| Urban | 92 | 1991 | JMP9301 |
| Rural | 77 | 1991 | JMP9301 |
| Access to Sanitation | | | |
| Urban | 75 | 1991 | JMP9301 |
| Rural | 40 | 1991 | JMP9301 |
| Deliveries/Trained Attendants | NA | | |

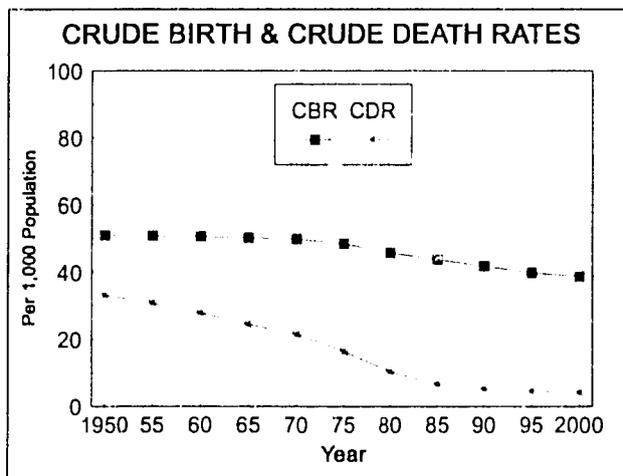
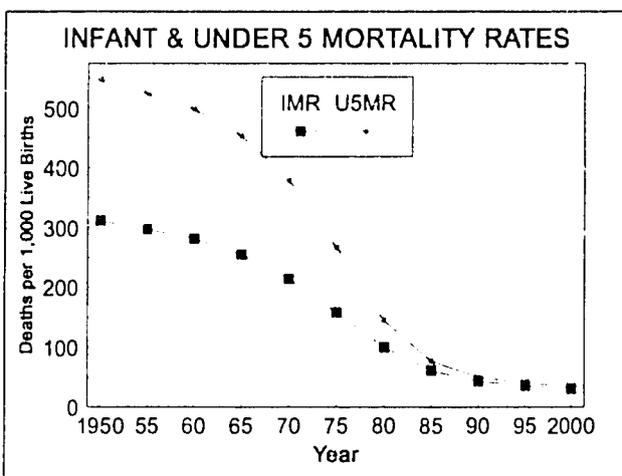
NA = Not available



Trends in Selected Demographic and Health Indicators

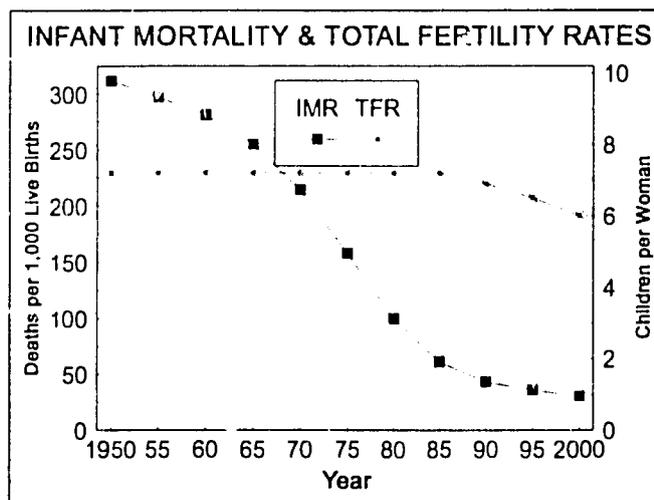
JULY 1994

| INDICATOR | 1950 | 1955 | 1960 | 1965 | 1970 | 1975 | 1980 | 1985 | 1990 | 1995 | 2000 | SOURCE |
|-------------------------|------|------|------|------|------|------|------|------|------|------|------|---------|
| Infant Mortality | 312 | 297 | 282 | 255 | 214 | 173 | 100 | 61 | 43 | 36 | 31 | BUC9302 |
| Under Five Mortality | 548 | 524 | 498 | 455 | 379 | 267 | 145 | 77 | 51 | 41 | 34 | BUC9302 |
| Crude Birth Rate | 51 | 51 | 51 | 50 | 50 | 48 | 46 | 44 | 42 | 40 | 39 | UNP9200 |
| Crude Death Rate | 33 | 31 | 28 | 24 | 21 | 16 | 10 | 7 | 5 | 5 | 4 | UNP9200 |
| Avg. Annual Growth Rate | 2 | 2 | 2 | 3 | 3 | 4 | 5 | 4 | 4 | 4 | 3 | UNP9200 |
| Total Fertility Rate | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 6.9 | 6.5 | 6 | UNP9200 |



IMR and TFR

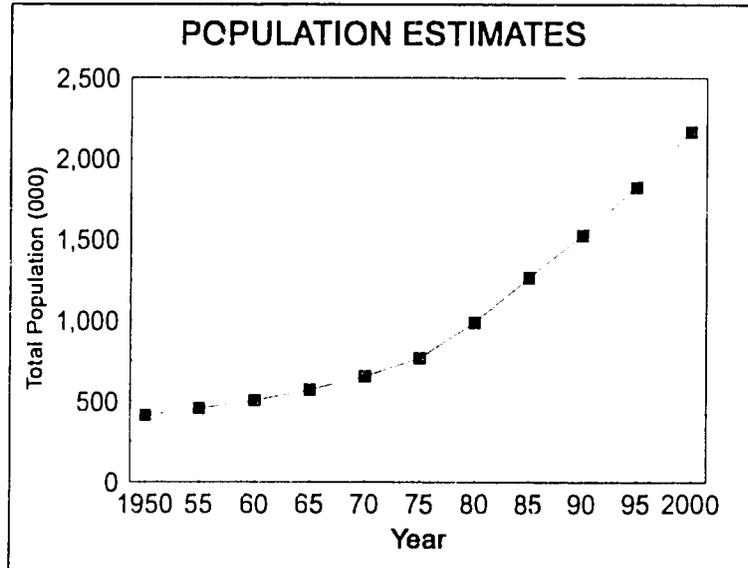
The relationship between IMR and TFR is currently a subject under review by the scientific community. While there is not conclusive evidence that the IMR and TFR are causally linked and necessarily decline together, there is empirical evidence for suspecting that such a reinforcing relationship exists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



Population Estimates/Pyramid

JULY 1994

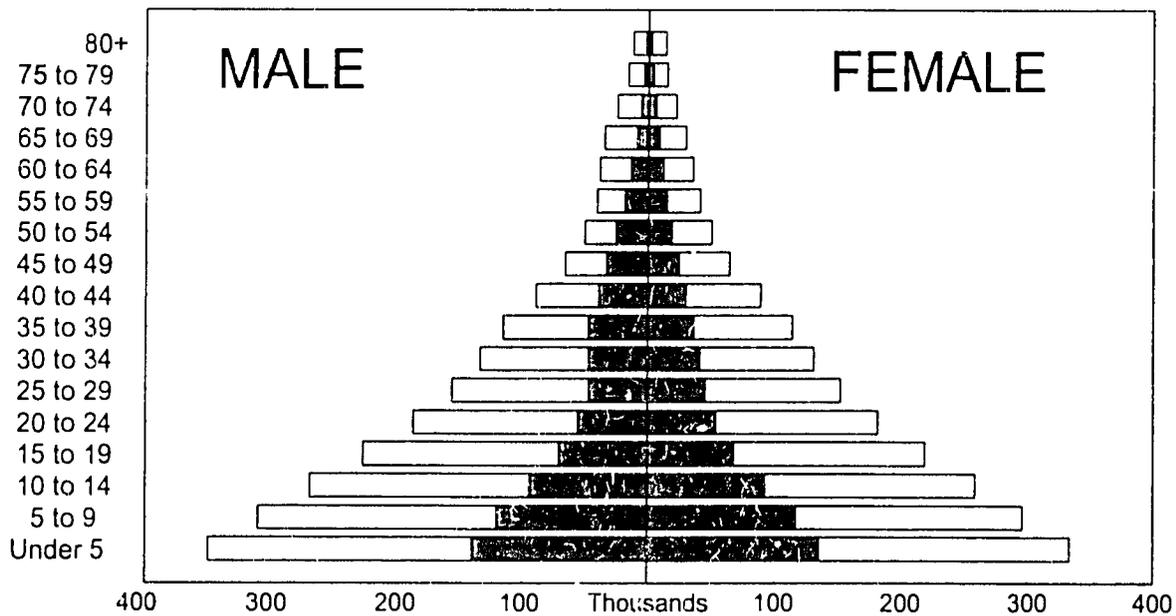
| POPULATION ESTIMATES (000s) | | |
|-----------------------------|-------|---------|
| YEAR | VALUE | SOURCE |
| 1950 | 413 | UNP9200 |
| 1955 | 455 | UNP9200 |
| 1960 | 505 | UNP9200 |
| 1965 | 571 | UNP9200 |
| 1970 | 654 | UNP9200 |
| 1975 | 766 | UNP9200 |
| 1980 | 988 | UNP9200 |
| 1985 | 1,263 | UNP9200 |
| 1990 | 1,524 | UNP9200 |
| 1995 | 1,822 | UNP9200 |
| 2000 | 2,168 | UNP9200 |



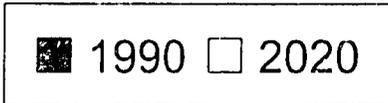
CURRENT & PROJECTED POPULATION

By Age & Gender: 1990 - 2020

Total Population 1990: 1,480,531 Total Population 2020: 4,174,612



Source: BUC9401

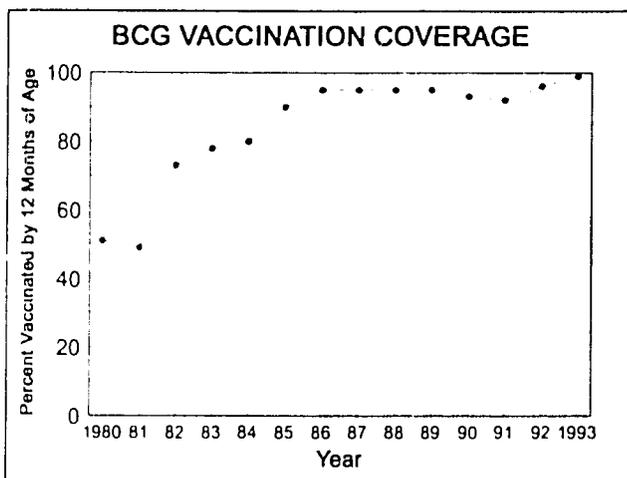




Trends in Selected Health and Child Survival Indicators

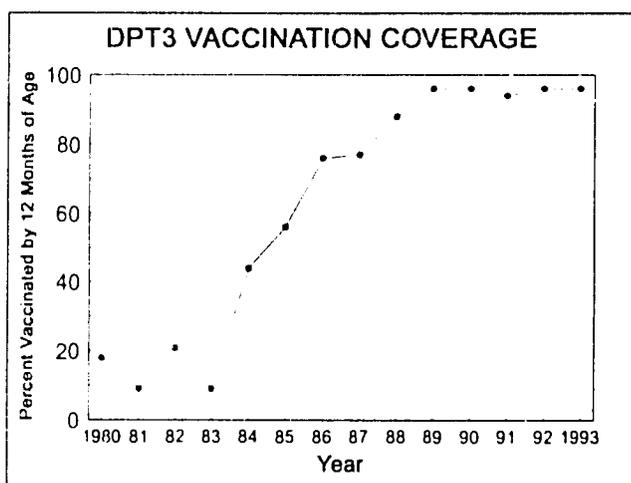
Vaccination Coverage Rates

JULY 1994



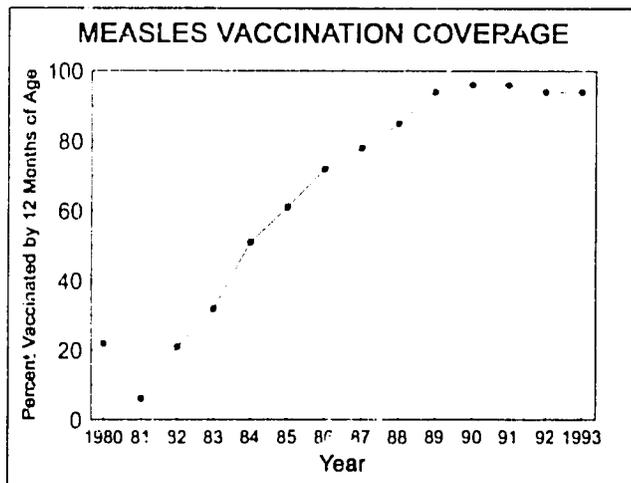
BCG COVERAGE

| YEAR | PERCENT | SOURCE |
|------|---------|---------|
| 1980 | 51 | WHE8700 |
| 1981 | 49 | WHE8700 |
| 1982 | 73 | WHE8700 |
| 1983 | 78 | WHE8700 |
| 1984 | 80 | WHE8700 |
| 1985 | 90 | WHE8700 |
| 1986 | 95 | WHE8800 |
| 1987 | 95 | WHE8900 |
| 1988 | 95 | WHE8900 |
| 1989 | 95 | WHE9001 |
| 1990 | 93 | WHE9100 |
| 1991 | 92 | WHE9202 |
| 1992 | 96 | WHE9301 |
| 1993 | 99 | WHE9401 |



DPT3 COVERAGE

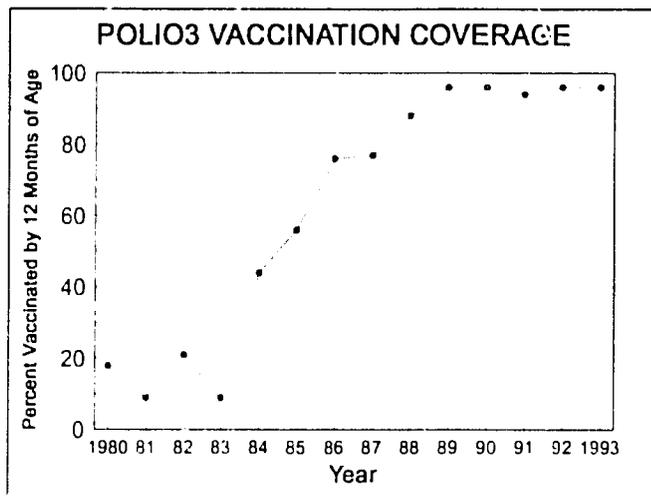
| YEAR | PERCENT | SOURCE |
|------|---------|---------|
| 1980 | 18 | WHE8700 |
| 1981 | 9 | WHE8700 |
| 1982 | 21 | WHE8700 |
| 1983 | 9 | WHE8700 |
| 1984 | 44 | WHE8700 |
| 1985 | 56 | WHE8700 |
| 1986 | 76 | WHE8800 |
| 1987 | 77 | WHE8900 |
| 1988 | 88 | WHE8900 |
| 1989 | 96 | WHE9001 |
| 1990 | 96 | WHE9100 |
| 1991 | 94 | WHE9202 |
| 1992 | 96 | WHE9301 |
| 1993 | 96 | WHE9401 |



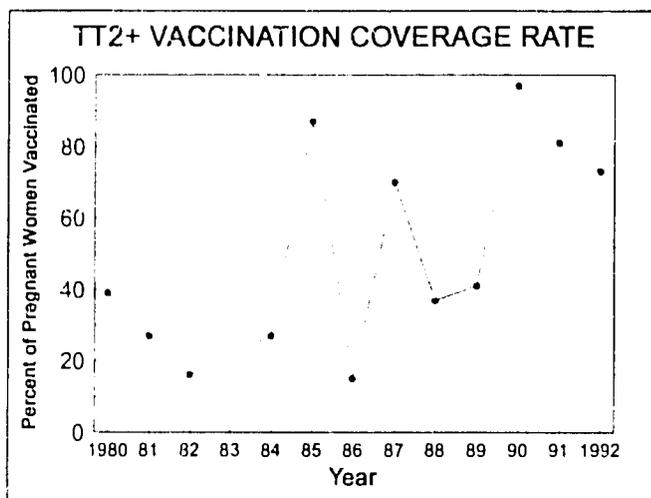
MEASLES COVERAGE

| YEAR | PERCENT | SOURCE |
|------|---------|---------|
| 1980 | 22 | WHE8700 |
| 1981 | 6 | WHE8700 |
| 1982 | 21 | WHE8700 |
| 1983 | 32 | WHE8700 |
| 1984 | 51 | WHE8700 |
| 1985 | 61 | WHE8700 |
| 1986 | 72 | WHE8800 |
| 1987 | 78 | WHE8900 |
| 1988 | 85 | WHE8900 |
| 1989 | 94 | WHE9001 |
| 1990 | 96 | WHE9100 |
| 1991 | 96 | WHE9202 |
| 1992 | 94 | WHE9301 |
| 1993 | 94 | WHE9401 |

Vaccination Coverage Rates, continued



| POLIO3 COVERAGE | | |
|-----------------|---------|---------|
| YEAR | PERCENT | SOURCE |
| 1980 | 18 | WHE8700 |
| 1981 | 9 | WHE8700 |
| 1982 | 21 | WHE8700 |
| 1983 | 9 | WHE8700 |
| 1984 | 44 | WHE8700 |
| 1985 | 56 | WHE8700 |
| 1986 | 76 | WHE8800 |
| 1987 | 77 | WHE8900 |
| 1988 | 88 | WHE8900 |
| 1989 | 96 | WHE9001 |
| 1990 | 96 | WHE9100 |
| 1991 | 94 | WHF9202 |
| 1992 | 96 | WHE9301 |
| 1993 | 96 | WHE9401 |

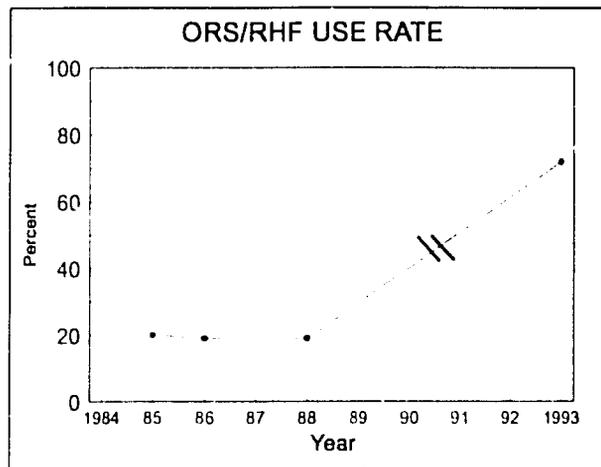
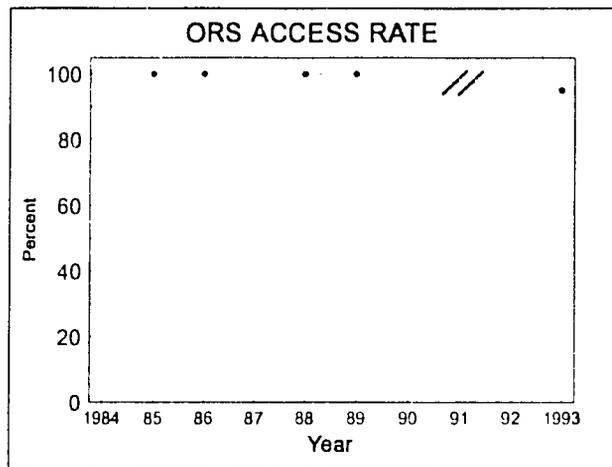


| TT2+ COVERAGE | | |
|---------------|---------|---------|
| YEAR | PERCENT | SOURCE |
| 1980 | 39 | WHE8700 |
| 1981 | 27 | WHE8700 |
| 1982 | 16 | WHE8700 |
| 1983 | NA | |
| 1984 | 27 | WHE8700 |
| 1985 | 87 | WHE8700 |
| 1986 | 15 | WHE8800 |
| 1987 | 70 | WHE8900 |
| 1988 | 37 | WHE8900 |
| 1989 | 41 | WHE9001 |
| 1990 | 97 | WHE9100 |
| 1991 | 81 | WHE9202 |
| 1992 | 73 | WHE9301 |
| 1993 | NA | |



ORS Access, ORS and/or RHF Use Rates

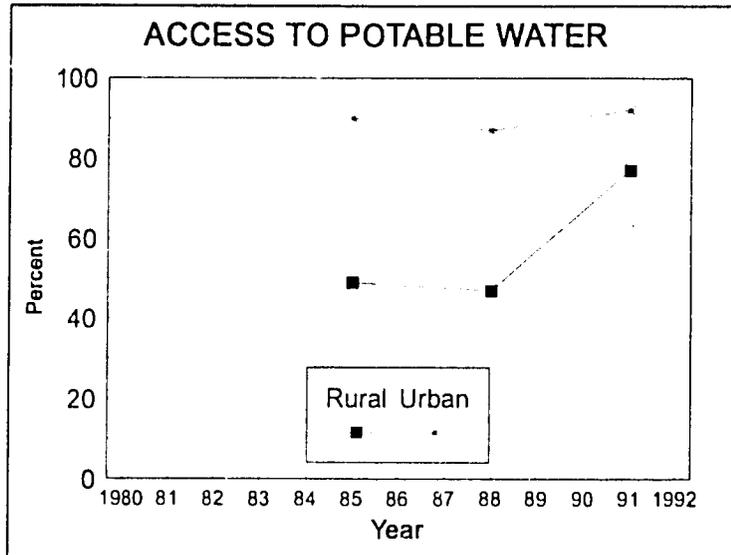
JULY 1994



| INDICATOR | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 |
|-------------|------|---------|---------|------|---------|---------|------|------|------|---------|
| ORS Access | NA | 100 | 100 | NA | 100 | 100 | NA | NA | NA | 95 |
| Source | | WHD8700 | WHD8800 | | WHD9000 | WHD9100 | | | | WHD9401 |
| ORS/RHF Use | NA | 20 | 19 | NA | 19 | NA | NA | NA | NA | 72 |
| Source | | WHD8700 | WHD8800 | | WHD9001 | | | | | WHD9401 |

Access to Potable Water

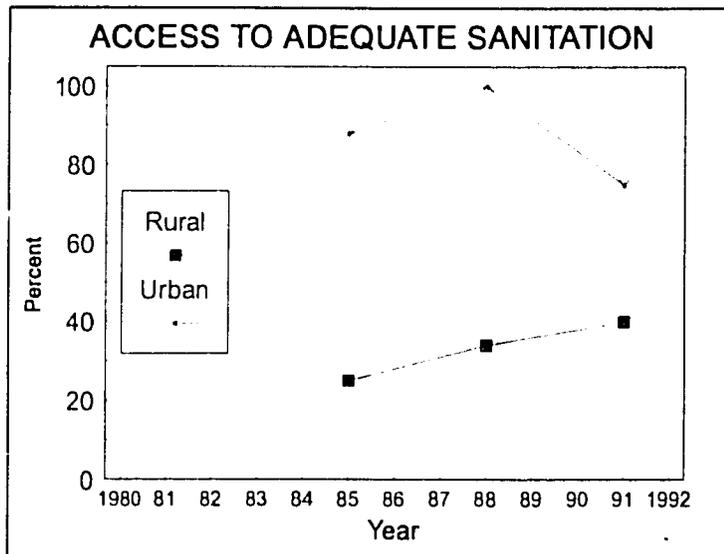
JULY 1994



| YEAR | RURAL SOURCE | URBAN SOURCE |
|------|--------------|--------------|
| 1980 | NA | NA |
| 1981 | NA | NA |
| 1982 | NA | NA |
| 1983 | NA | NA |
| 1984 | NA | NA |
| 1985 | 49 WHO9101 | 90 WHO9101 |
| 1986 | NA | NA |
| 1987 | NA | NA |
| 1988 | 47 WHO9101 | 87 WHO9101 |
| 1989 | NA | NA |
| 1990 | NA | NA |
| 1991 | 77 JMP9301 | 92 JMP9301 |
| 1992 | NA | NA |
| 1993 | NA | NA |

Access to Adequate Sanitation

JULY 1994



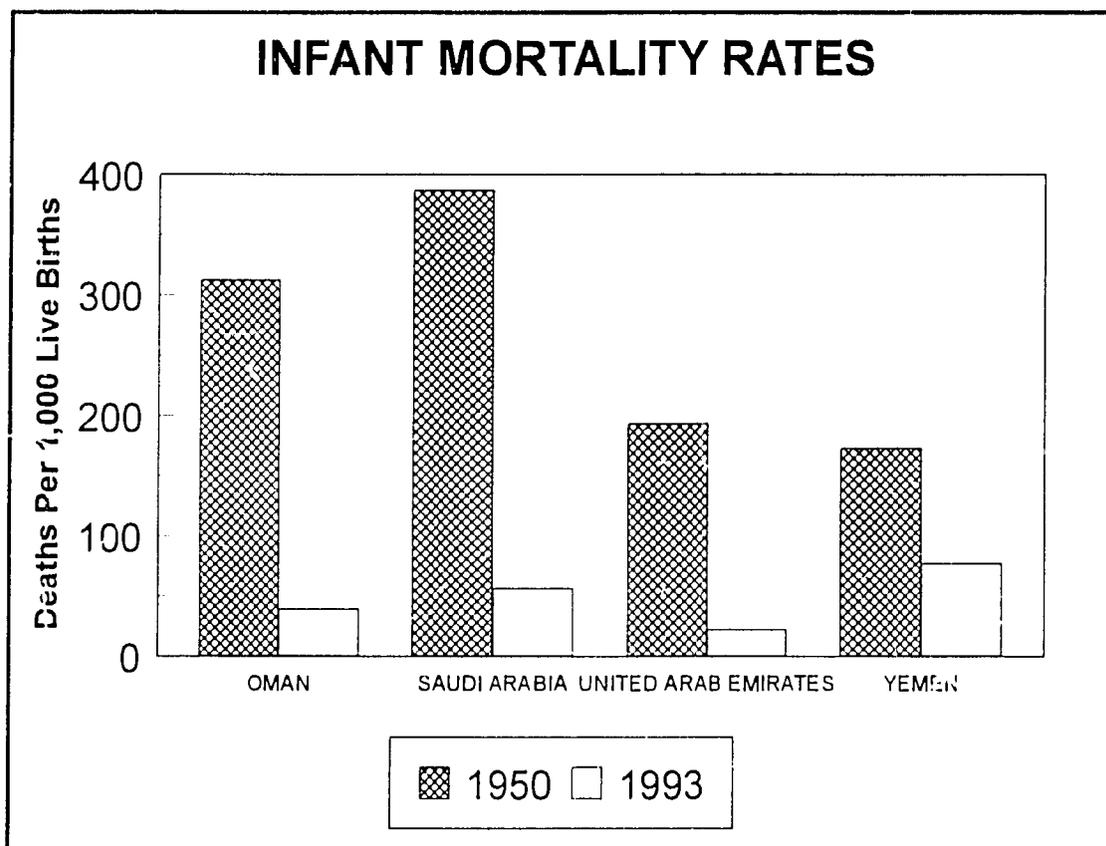
| YEAR | RURAL SOURCE | URBAN SOURCE |
|------|--------------|--------------|
| 1980 | NA | NA |
| 1981 | NA | NA |
| 1982 | NA | NA |
| 1983 | NA | NA |
| 1984 | NA | NA |
| 1985 | 25 WHO9101 | 88 WHO9101 |
| 1986 | NA | NA |
| 1987 | NA | NA |
| 1988 | 34 WHO9101 | 100 WHO9101 |
| 1989 | NA | NA |
| 1990 | NA | NA |
| 1991 | 40 JMP9301 | 75 JMP9301 |
| 1992 | NA | NA |
| 1993 | NA | NA |



COMPARATIVE INDICATORS

Comparative IMR Rates

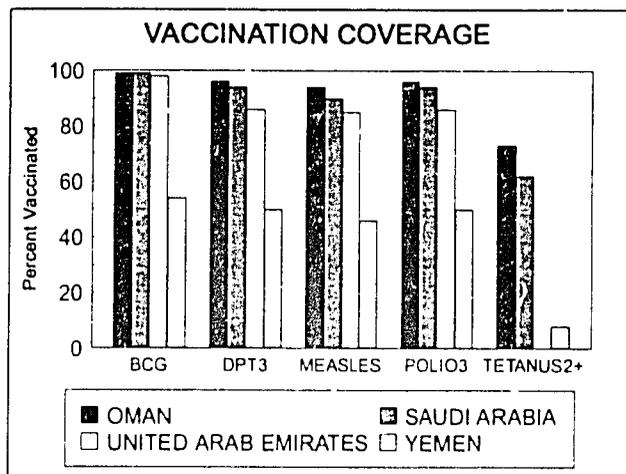
JULY 1994



| COUNTRY | 1950 | SOURCE | 1993 | SOURCE |
|----------------------|------|---------|------|---------|
| OMAN | 312 | BUC9302 | 39 | BUC9302 |
| SAUDI ARABIA | 387 | BUC9302 | 56 | BUC9302 |
| UNITED ARAB EMIRATES | 193 | BUC9302 | 22 | BUC9302 |
| YEMEN | 173 | CALXX03 | 77 | CALXX03 |

Comparative Vaccination Coverage Rates

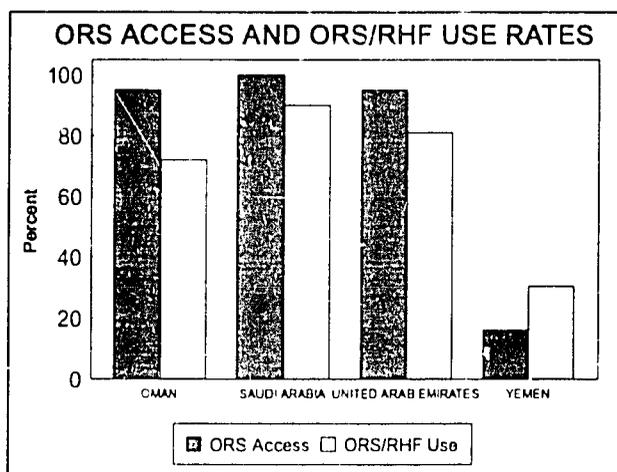
JULY 1994



| COUNTRY | INDICATOR | YEAR | VALUE | SOURCE |
|----------------------|-----------|------|-------|---------|
| OMAN | BCG | 1993 | 99 | WHE9401 |
| | DPT 3 | 1993 | 96 | WHE9401 |
| | Measles | 1993 | 94 | WHE9401 |
| | Polio 3 | 1993 | 96 | WHE9401 |
| | Tetanus 2 | 1992 | 73 | WHE9301 |
| SAUDI ARABIA | BCG | 1993 | 99 | WHE9401 |
| | DPT 3 | 1993 | 94 | WHE9401 |
| | Measles | 1993 | 90 | WHE9401 |
| | Polio 3 | 1993 | 94 | WHE9401 |
| | Tetanus 2 | 1993 | 62 | WHE9401 |
| UNITED ARAB EMIRATES | BCG | 1992 | 98 | WHE9301 |
| | DPT 3 | 1992 | 86 | WHE9301 |
| | Measles | 1992 | 85 | WHE9301 |
| | Polio 3 | 1992 | 86 | WHE9301 |
| | Tetanus 2 | | NA | |
| YEMEN | BCG | 1992 | 54 | WHE9301 |
| | DPT 3 | 1992 | 50 | WHE9301 |
| | Measles | 1992 | 46 | WHE9301 |
| | Polio 3 | 1992 | 50 | WHE9301 |
| | Tetanus 2 | 1992 | 8 | WHE9301 |

Comparative ORS Access, ORS and/or RHF Use Rates

JULY 1994



| COUNTRY | INDICATOR | YEAR | VALUE | SOURCE |
|----------------------|-----------------|------|-------|---------|
| OMAN | ORS Access Rate | 1993 | 95 | WHD9401 |
| | ORT Use Rate | 1993 | 72 | WHD9401 |
| SAUDI ARABIA | ORS Access Rate | 1993 | 100 | WHD9401 |
| | ORT Use Rate | 1993 | 90 | WHD9401 |
| UNITED ARAB EMIRATES | ORS Access Rate | 1991 | 95 | WHD9201 |
| | ORT Use Rate | 1991 | 81 | WHD9201 |
| YEMEN | ORS Access Rate | 1989 | 16 | WHD9100 |
| | ORT Use Rate | 1991 | 31 | DHS9205 |



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.

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

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.

III: SOURCES

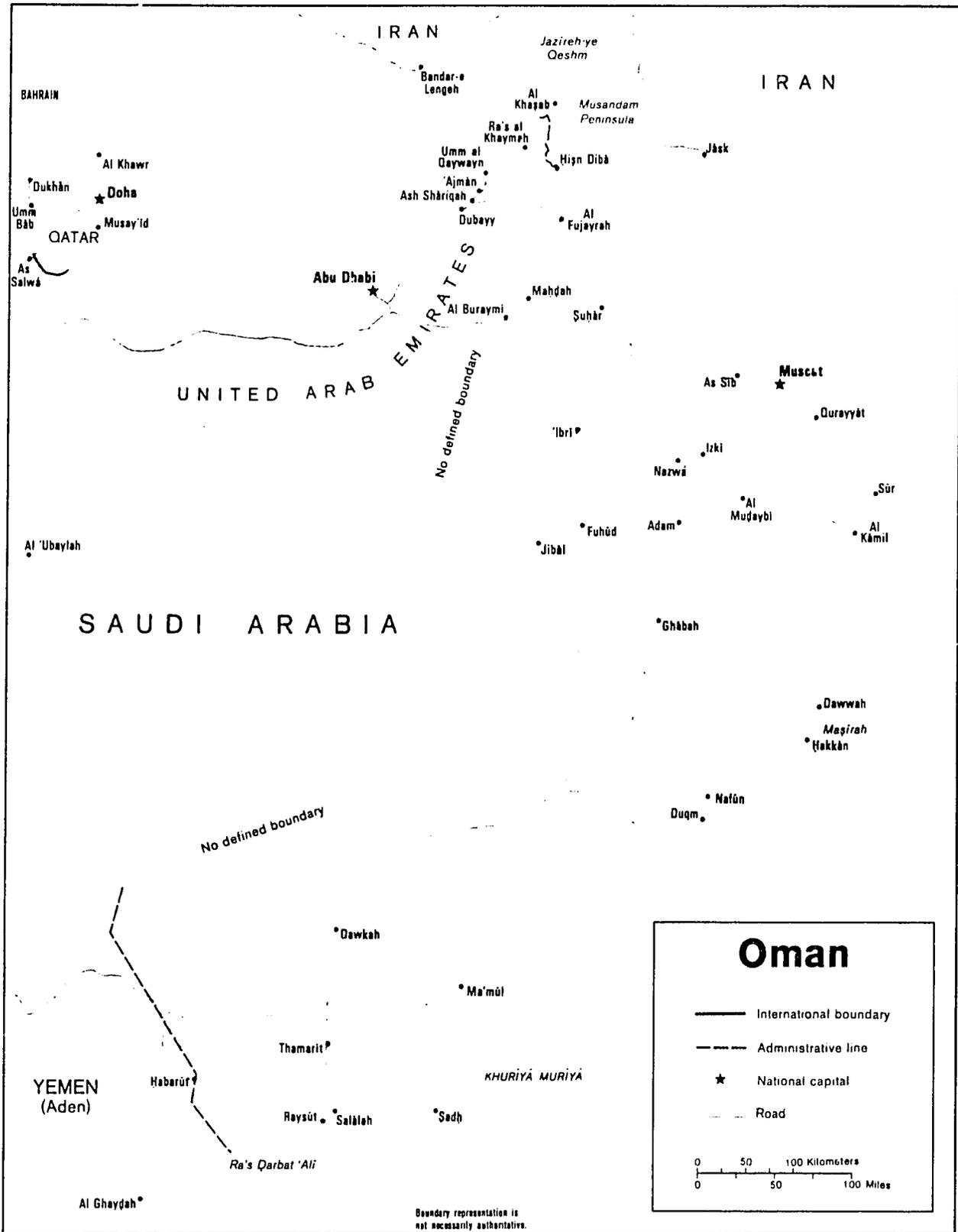
JULY 1994

- BUC9300 United States Bureau of the Census. Facsimile from Peter Johnson dated 3/3/93. Data prepared following the meeting on mortality estimation. 2/25/93.
- BUC9302 Time series estimates of Infant Mortality generated by applying the ratio of the BUCEN estimate for 1992 to the World Population Prospects estimate for 1992 to the annual values dating back to 1950 as estimated in the World Population Prospects. Under 5 Mortality estimates are calculated by applying the appropriate Coale-Demeny model to the Infant Mortality estimates.
- BUC9401 U.S. Bureau of the Census (BUCEN). International Data Base. Version dated March, 1994.
- CALXX01 Calculated from the values for total population, crude birth rate and infant mortality from designated sources for those variables.
- CALXX03 Times series estimates of Infant Mortality generated by applying the ratio of the DHS estimate for the most current 5 year period (or IMR from other current source) to the projected value from the World Population Prospects for the same year and applying that ratio to the projected time series in the WPP. Under 5 Mortality estimates are calculated by applying the appropriate Coale-Demeny model to the Infant Mortality time series.
- DHS9205 Central Statistical Organization, Pan Arab Project for Child Development, Institute for Resource Development/Marco International, Inc. Yemen Demographic and Maternal and Child Health Survey 1991/92. Preliminary Report. Columbia, MD: IRD, 1992.
- JMP9301 WHO/UNICEF Joint Monitoring Programme. Water Supply and Sanitation Sector Monitoring Report 1993. Sector Status as of December 1991. WHO and UNICEF. August, 1993.
- UNP9200 Department of International Economic and Social Affairs, United Nations. World Population Prospects 1992. (ST/ESA/SER.A/120) New York: UN, 1992.
- WHD8700 World Health Organization. Programme for Control of Diarrhoeal Diseases: Interim Programme Report 1986. (WHO/CDD/87.26) Geneva: WHO, 1987.
- WHD8800 World Health Organization. Programme for Control of Diarrhoeal Diseases: Sixth Programme Report 1986-1987. (WHO/CDD/88.28) Geneva: WHO, 1988.
- WHD9000 World Health Organization, Programme for Control of Diarrhoeal Diseases facsimile, February 14, 1990.
- WHD9001 World Health Organization, Programme for Control of Diarrhoeal Diseases facsimile, March 27, 1990.
- WHD9100 World Health Organization. Programme for Control of Diarrhoeal Diseases: Interim Programme Report 1990. (WHO/CDD/91.36) Geneva: WHO, 1991.



III: Sources

- WHD9201 Programme For Control Of Diarrhoeal Diseases. Eighth Programme Report 1990-1991. WHO/CDD/92.38. Geneva: World Health Organization, 1992.
- WHD9401 Advanced Copy of Annex 1 of the WHO/CDR Annual Report. Received by facsimile. March 29, 1994.
- WHE8700 World Health Organization. Expanded Programme on Immunization Information System Report, January 1987. Geneva: WHO, 1987.
- WHE8800 World Health Organization. Expanded Programme on Immunization Information System Report, January 1988. Geneva: WHO, 1988.
- WHE8900 World Health Organization. Expanded Programme on Immunization Information System Report, July 1989. (WHO/EPI/GEN/89.2) Geneva: WHO, 1989.
- WHE9001 World Health Organization. Expanded Programme on Immunization Information System Report, July 1990. (WHO/EPI/CEIS/90.2) Geneva: WHO, 1990.
- WHE9100 World Health Organization. Expanded Programme on Immunization Information System Report, April 1991. (WHO/EPI/CEIS/91.1) Geneva: WHO, 1991.
- WHE9202 World Health Organization. Expanded Programme on Immunization Information System Report, October 1992. (WHO/EPI/CEIS/92.2) Geneva: WHO, 1992.
- WHE9301 Facsimile from WHO/EPI of the pages in the 9/93 report of the WHO EPI Information System containing the most current vaccination coverage rates. September 24, 1993.
- WHE9401 Download of WHO/EPI vaccination coverage files from INTERNET, March 24, 1994.
- WHO9101 World Health Organization. World Health Organization Disk: Water Supply and Sanitation Service Coverage. Geneva: WHO, October 29, 1991.



Base 504161 11-79 (544486)