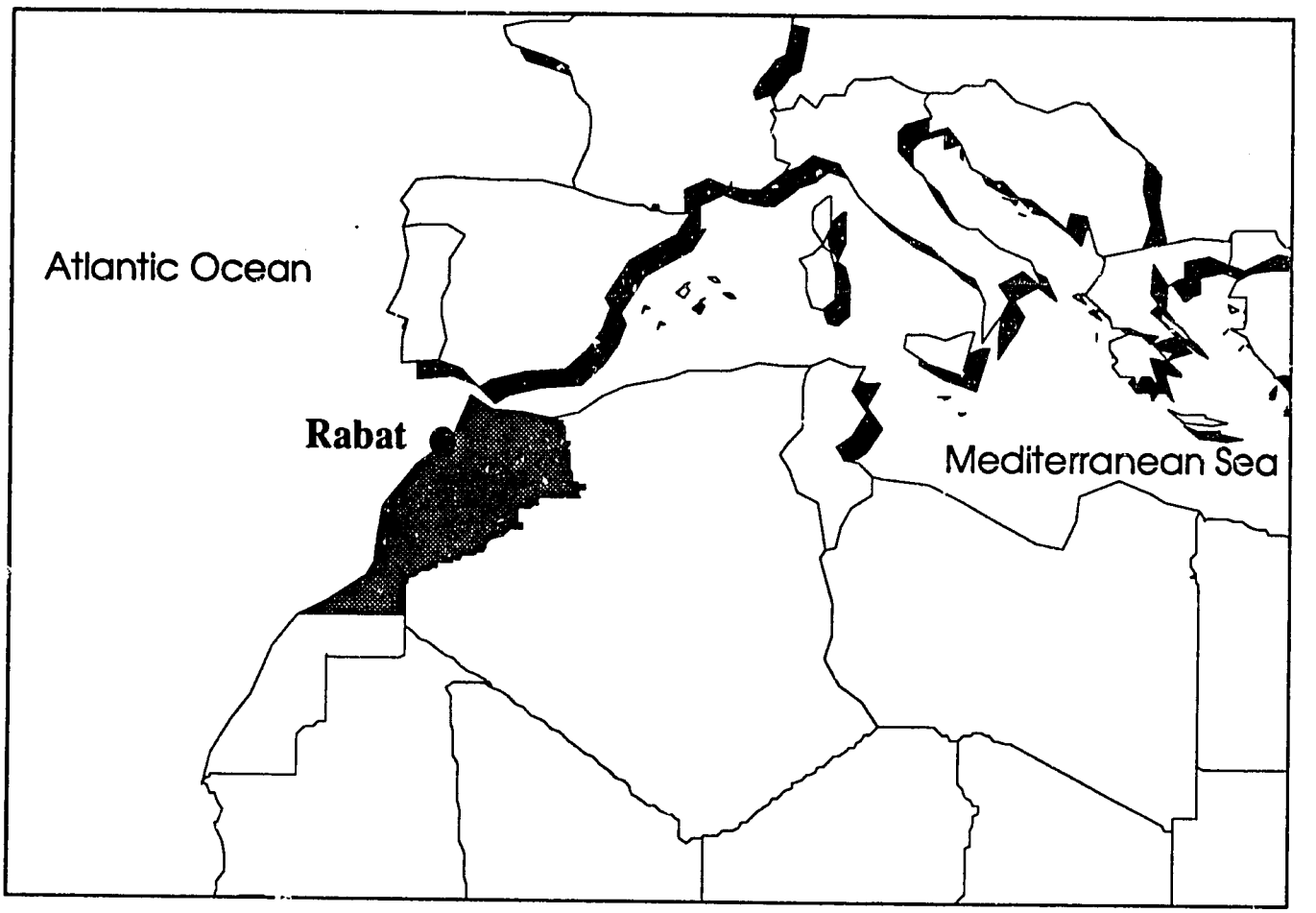
PN-ABL-308

Country Health Profile

Morocco

May 1990



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Center for International Health Information
USAID Health Information System
1601 N. Kent Street
Suite 1001
Arlington, Virginia 22209
(703) 524-5225

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 of Science and Technology, U.S. Agency for International Development.

The Center for International Health Information
Barton R. Burkhalter, Ph.D., Director
1601 N. Kent Street, Suite 1001
Arlington, VA 22209
(703) 524-5225
FAX (703) 243-4669
Telex 272785 ISTI UR

MOROCCO

USAID Country Health Profile
(Selected Data)
May 1990

This is one of a series of USAID Country Health Profiles published by ISTI's Center for International Health Information. Each 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. While some of the information comes from the Center's databases, succinct reports from other publications are also included when available.

The USAID Country Health Profiles are intended to provide current and trend data in a concise format to evaluation teams, consultants and other interested individuals, and are updated annually. 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 Country Health Profiles and Standard Reports.

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DATA NOTES

DEMOGRAPHIC INDICATORS

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

The **Number of Live Births** is an estimate of the number of children born alive in a given year.

The **Infant Mortality Rate** is 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).

Although acknowledged as one of the best indicators of "development," the infant mortality rate is one of the more difficult to calculate. One problem inherent in the definition of the indicator is the fact that some portion of the deaths in the given year are occurring among children born in the previous year; that is the numerator of the indicator is determined in a different cohort of children than is the denominator. Estimates are generally made for a three or five year period to minimize the effects of this inherent weakness. For this reason, efforts to observe annual trends in this indicator can be misleading.

Child Mortality Rate: For each 1000 children who reach their first birthday in a given year, the child mortality rate is an estimate of the number of those children who will die before their fifth birthday.

Life Expectancy at Birth is 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 is a mid-year estimate of the total number of children under age 1.

Annual Infant Deaths is an estimate of the number of deaths occurring to children under age one in a given year.

The **Total Fertility Rate** is an estimate of the average number of children a woman would bear during her entire reproductive lifespan given current age-specific fertility rates.

Sources: The primary source for all the demographic indicators except as otherwise noted is *World Population Prospects: 1988*, Population Division, Department of International Economic and Social Affairs, United Nations (referred to as **UN/POP/1988**). In addition, *World Population Profile: 1987*, Bureau of Census, U.S. Department of Commerce (referred to as **BUCEN/1987**) is a source for Total Population in the "Trends" table, page 4; *Mortality of Children under Age 5: World Estimates and Projections, 1950 - 2025*, Population Studies No. 105, Population Division, Department of International Economic and Social Affairs, United Nations (referred to as **UN/POP/105**) is the source for Child Mortality Rates. *Enquête Nationale sur la Planification Familiale, la Fécondité et la Santé de la Population au Maroc, 1987*, Demographic and Health Surveys, Institute for Resource Development/Westinghouse (referred to as **DHS/1987**) is the source for the Infant Mortality Rate and the Total Fertility Rate in the "How USAID Helps" Fact Sheet, Page 10. Children Under 1 and Infant Deaths were calculated using the Population and Crude Birth Rates reported in the WPP and the Infant Mortality Rate from DHS/1987.

VACCINATION COVERAGE RATES

Vaccination Coverage in Children is defined as an estimate of the percentage of living children between the ages of 12 through 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 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 is 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 women 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 varies with the number received and time elapsed.) The revised indicator is referred to as TT2+. Rates are computed using administrative methods or surveys.

Sources: The primary source for vaccination coverage data are the annual reports of the Expanded Programme on Immunization Report of the World Health Organization (referred to as **WHO/EPI**); the most recent being EPI/MISC/90.1, January 1990. Vaccination Coverage for 1987 come from *Enquête Nationale sur la Planification Familiale, la Fécondité et la Santé de la Population au Maroc, 1987*, Demographic and Health Surveys, Institute for Resource Development/Westinghouse (referred to as **DHS/1987**). 1989 Vaccination coverage rates are taken from *Enquête Nationale sur la Couverture Vaccinale*, June 1989, carried out by the Moroccan Ministry of Public Health (referred to as **MMOH**).

ORS ACCESS AND ORT USE RATES

The **ORS Access Rate** is 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 and, therefore, it may fluctuate dramatically as improved methods of estimation are devised.

The **ORT Use Rate** is 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 the two week period prior to the survey.

Sources: The primary sources for data on oral rehydration, both access and use, are the annual reports of the Diarrheal Disease Control Program of the World Health Organization (referred to as **WHO/CDD**) except as otherwise noted. *Enquête Nationale sur la Planification*

Familiale, la Fécondité et la Santé de la Population au Maroc, 1987, Demographic and Health Surveys, Institute for Resources Development/Westinghouse (referred to as **DHS/1987**) is the source for the 1987 ORT Use Rate in the "Trends" table, page 5.

CONTRACEPTIVE PREVALENCE

The Contraceptive Prevalence Rate as applied in Morocco is an estimate of the proportion of married women, aged 15 through 49, currently using contraception. "Modern methods" of contraception depend on the use of products, devices, or surgery, such as pills, injectables, IUDs, condoms, vaginal methods (spermicides, diaphragms, or caps), and voluntary sterilization. "Traditional methods" of contraception do not depend on the use of products or devices, such as periodic abstinence, rhythm, or withdrawal. "All methods" include modern and traditional methods.

Data from DHS/1987 in the "How USAID Helps" Fact Sheet, page 10, is for modern methods only. The source for the 1987 data on the "Trends" table, page 5, is from DHS/1987; the remaining data comes from BUCEN/1989.

Sources: The source for contraceptive prevalence data for 1980 and 1984 on the "Trends" table, page 5 is *World Population Profile:1989*, Bureau of the Census, U.S. Department of Commerce (referred to as **BUCEN/1989**. *Enquête Nationale sur la Planification Familiale, la Fécondité et la Santé de la Population au Maroc, 1987*, Demographic and Health Surveys, Institute for Resources Development/Westinghouse (referred to as **DHS/1987**) is the source for 1987 data on the "Trends" table on page 5 as well as the "How USAID Helps" Fact Sheet, page 10..

NUTRITION

Adequate Nutrition Status is the proportion of children 12 through 23 months of age who are adequately nourished. 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" (standard deviations) below the median for 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.

Appropriate Infant Feeding is 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 considered 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 children in the target group (children under 1) are being fed correctly at the moment of the survey. They do <u>not</u> give an indication of the proportion of children fed appropriately throughout their first year.

Exclusively Breastfed is an estimate of the proportion of infants through four months (120 days) of age who receive no foods or liquids other than breast milk.

Introduction of Solids is an estimate of the proportion of infants over six months (181 days) of age still breastfeeding but also receiving complementary weaning foods.

Median Duration of Breastfeeding is an estimate of the median duration of breastfeeding computed from cross-sectional survey data using the Current Status Method. According to this method, the value reported is the first month of life during which half of the children surveyed are no longer breastfed. The first month of life is counted as "0", the second as "1", etc.

Source: The source for nutrition and feeding data in the "Trends" table, page 5 is *Enquête Nationale sur la Planification Familiale, la Fécondité et la Santé de la Population au Maroc, 1987*, Demographic and Health Surveys, Institute for Resources Development/Westinghouse (referred to as **DHS/1987**).

WATER AND SANITATION

Urban Water Supply Coverage is an estimate of the percentage of all persons living in urban areas (defined as population centers of 2000 or more persons) who live within 200 meters of a stand pipe or fountain source of water.

Rural Water Supply Coverage is an estimate of the percentage of all persons not living in urban areas with a source of potable water close enough to the home that family members do not spend disproportionate amount of time fetching water.

Urban Adequate Sanitation Coverage is an estimate of the percentage of all persons living in urban areas (defined aas population centers of 2000 or more persons) with sanitation service provided through sewer systems or individual in-house or in-compound excreta disposal facilities (latrines, septic tanks).

Rural Adequate Sanitation Coverage is an estimate of the percentage of all persons not living in urban areas with sanitation service provided through individual in-house or in-compound excreta disposal facilities (latrines).

Source: *The International Drinking Water Supply and Sanitation Decade Directory*, Liverpool, England: Thomas Telford Ltd., 1987, compiled by *World Water* magazine in collaboration with the World Health Organization (referred to as **WHO/1987**).

USAID PROJECTS AND FUNDING

The primary souce for information related to USAID projects is the USAID Health Projects Database (HPD) operated by ISTI's Center for International Health Information.

The HPD tracks bilateral, regional and centrally-funded USAID projects and sub-projects with a health component, including child survival, AIDS, nutrition, water supply and sanitation, and other health related activities. Projects are identified for the HPD through the annual Health and Child Survival Questionnaire, Annual Budget Submissions (ABS), and the Congressional Presentation (CP). The HPD includes some, but not all, health and nutrition related projects funded with local currency (PL480) or with Population Account monies. Project Development and Support (PD&S) activities are included in the HPD when they have been identified as health related in the CP, ABS or questionnaire.

Trends in Selected Demographic Indicators
Morocco
1950 - 2000

	1950	1955	1960	1965	1970	1975	1980	1985	1990	1995	2000
Total Population (000)											
UN/POP/1988	-	-	-	-	-	-	-	22,120	25,139	28,274	31,366
BUCEN/1987	9,343	-	-	-	15,909	-	20,545	-	26,249	-	33,274

	1950-1955	1955-1960	1960-1965	1965-1970	1970-1975	1975-1980	1980-1985	1985-1990	1990-1995	1995-2000
Infant Mortality Rate										
UN/POP/1988	180	170	155	138	122	110	97	82	68	56
Child Mortality Rate										
UN/POP/1988	159	133	112	95	77	62	50	39	29	21
Total Fertility Rate										
UN/POP/1988	7.2	7.2	7.2	7.1	6.9	5.9	5.4	4.8	4.2	3.6
Number of Live Births (000)										
UN/POP/1988	2,405	2,742	3,125	3,450	3,718	3,614	3,969	4,169	4,233	4,137

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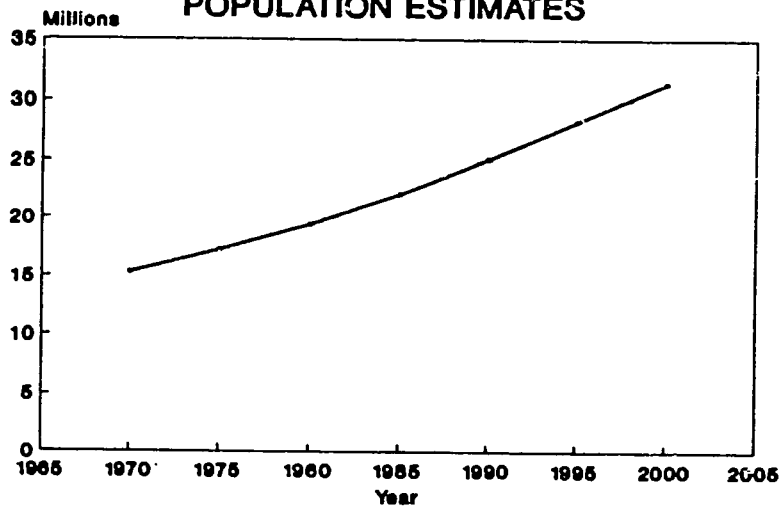
Trends in Selected Health and Child Survival Indicators - Morocco
1980 - 1989

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Vaccination Coverage										
WHO/EPI, DHS/1987 & MMOH										
a. BCG		-	-	70	67	-	72	83	75	99
b. DPT 3		43	44	42	46	-	53	63	60	92
c. Measles		-	-	35	40	-	48	58	56	92
d. Polio 3		45	44	42	46	-	53	63	60	92
e. Tetanus 2		-	-	-	-	-	33	-	33	58
ORS Access and ORT Use										
WHO/CDD, DHS/1987										
a. ORS Access						43.9	-	38.2	-	
b. ORT Use						4.4	14.7	15.0	45.0	
Contraceptive Prevalence										
DHS/1987, BUCEN 1989										
a. All Methods	19.0				25.5			35.9		
b. Modern Methods	16.1				21.3			29.0		
Nutrition and Infant Feeding										
DHS/1987										
a. Adequate Nutritional Status								30		
b. Appropriate Infant Feeding								47		
c. Exclusively Breastfed								42		
d. Introduction of Solids								43		
e. Median Duration of Breastfeeding (months)								15.2		
Water Supply Coverage (% Served)										
WHO/1987										
a. Urban Areas	91%					100%				
b. Rural Areas	25%					25%				
Adequate Sanitation Coverage (% Served)										
WHO/1987										
a. Urban Areas	86%					86%				
b. Rural Areas	15%					26%				

See Data Notes on page 2.

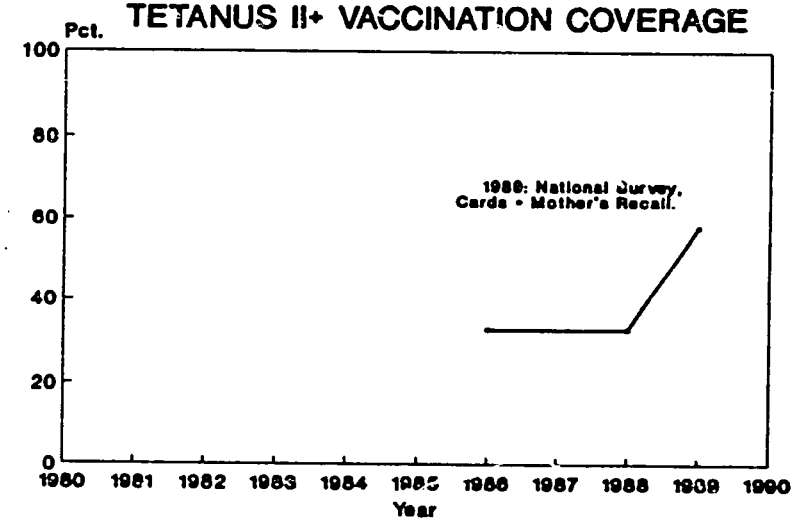
MOROCCO

POPULATION ESTIMATES



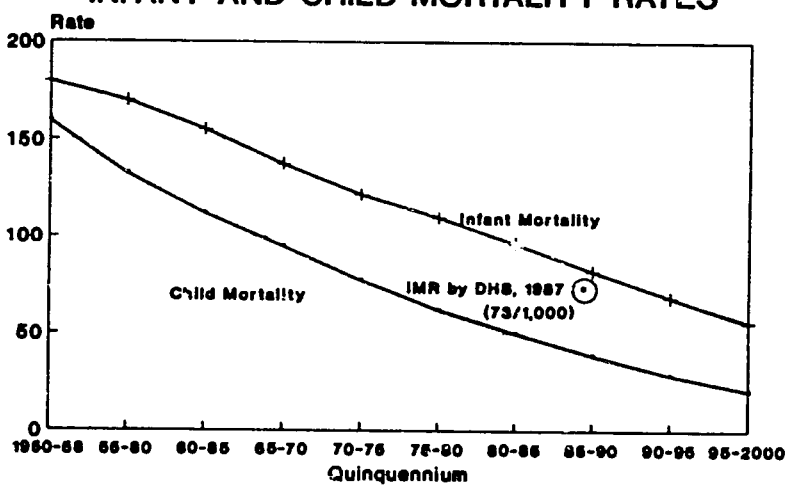
SOURCE: United Nations,
World Population Prospects, 1988

TETANUS II+ VACCINATION COVERAGE



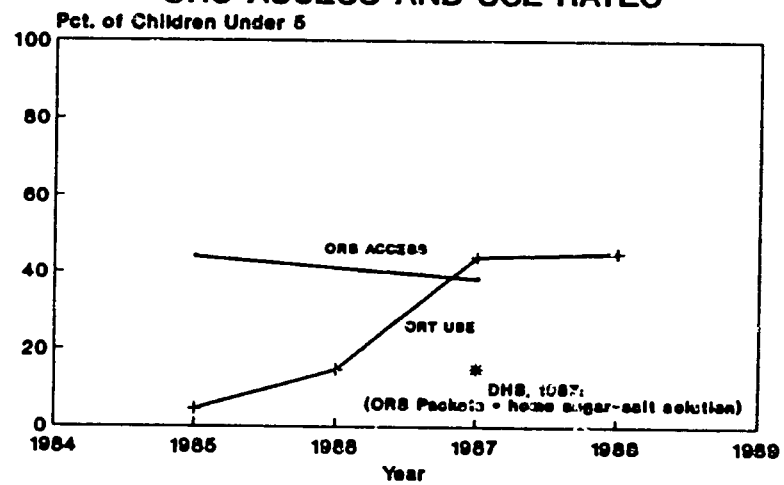
SOURCE: World Health Organization
Annual Reports of the CDD Programme

INFANT AND CHILD MORTALITY RATES



SOURCE: United Nations, 1988
1) World Population Prospects, and
2) Mortality of Children Under Age 5

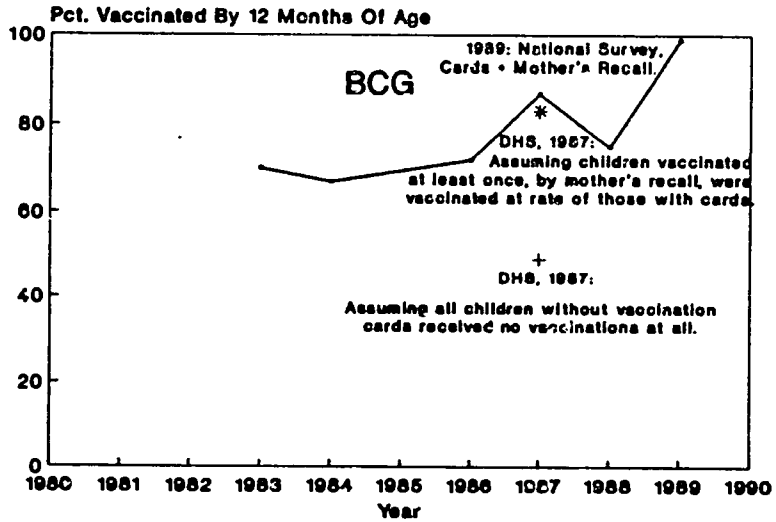
ORS ACCESS AND USE RATES

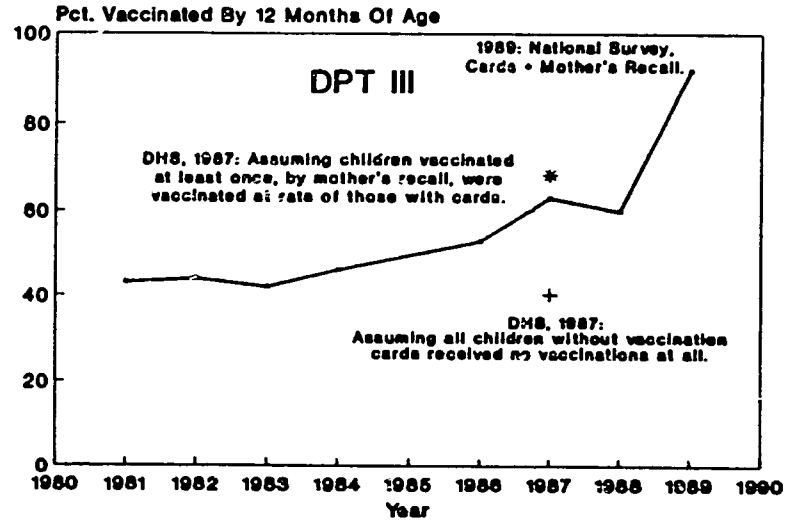


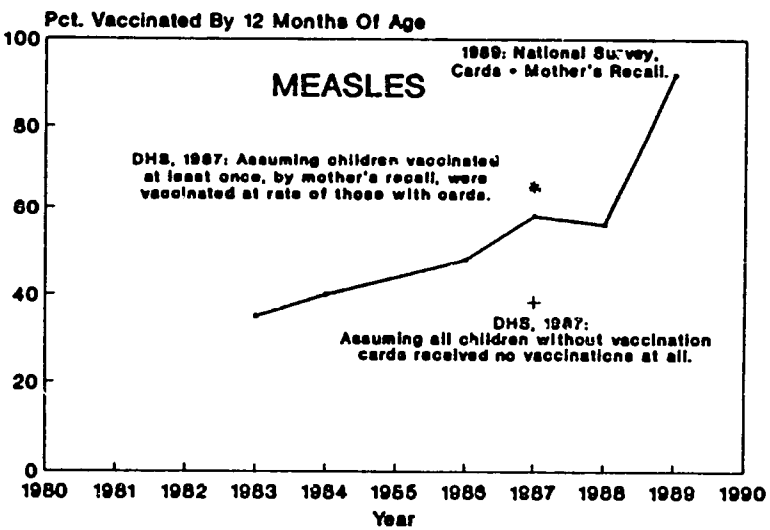
SOURCE: World Health Organization,
Annual Reports of the Programme for
Control of Diarrhoeal Diseases

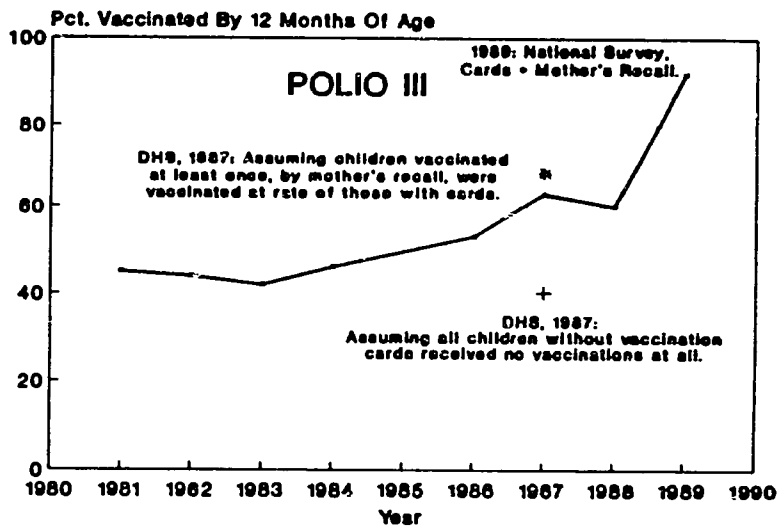
CIHI, ISTI; 3/90

VACCINATION COVERAGE RATES IN MOROCCO





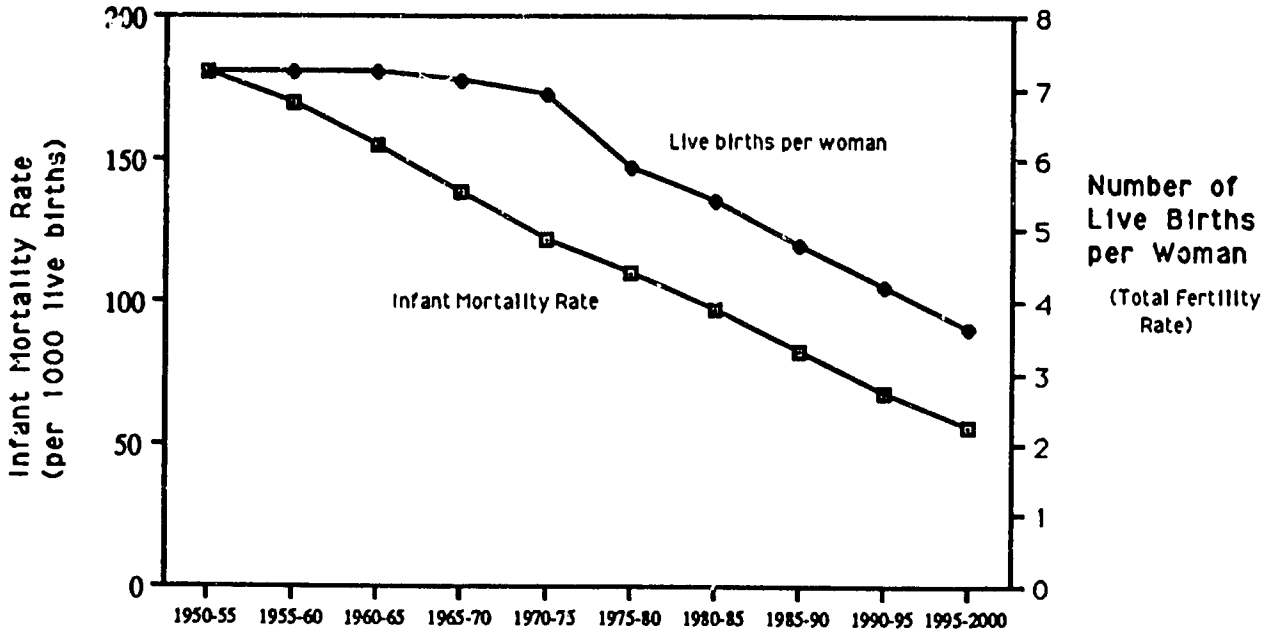




SOURCE: WHO, Annual Reports of the EPI Programme

CIHI, ISTI; 3/90

THE DEMOGRAPHIC TRANSITION IN MOROCCO, 1950 - 2000



Year	Infant Mortality Rate	Number of Live Births per Woman (Total Fertility Rate)
1950-55	180	7.2
1955-60	170	7.2
1960-65	155	7.2
1965-70	138	7.1
1970-75	122	6.9
1975-80	110	5.9
1980-85	97	5.4
1985-90	82	4.8
1990-95	68	4.2
1995-2000	56	3.6

Source: UN/POP/1988.

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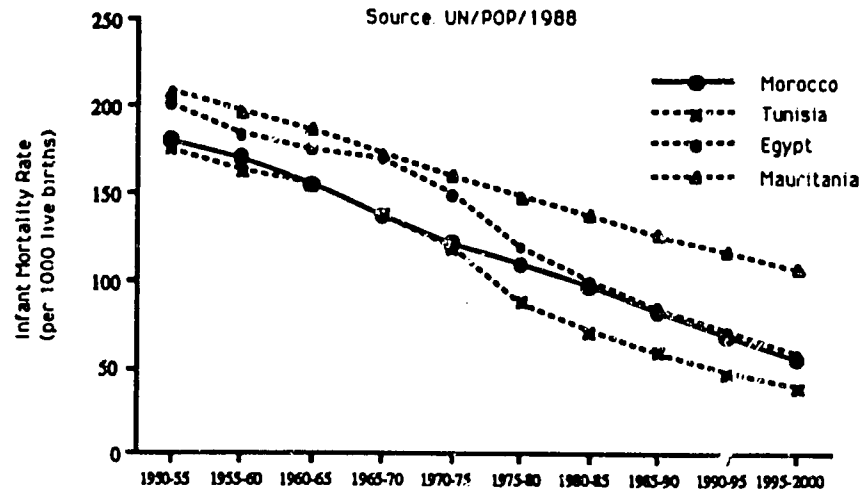
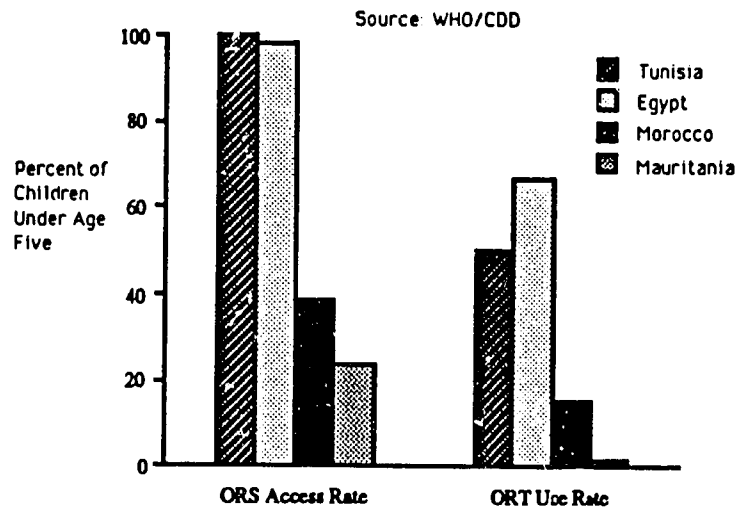
Morocco Child Survival Indicators Compared to Neighboring Countries

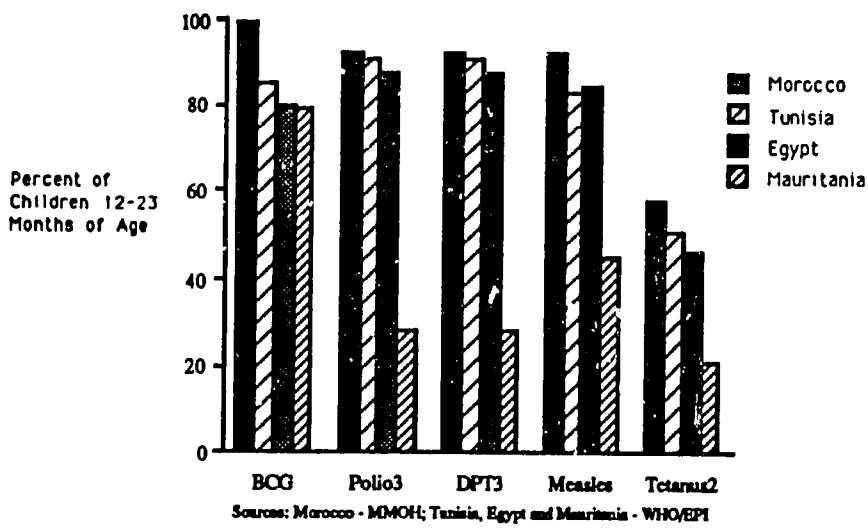
Estimates of Infant Mortality Rates



1988 ORS Access and ORT Use Rates

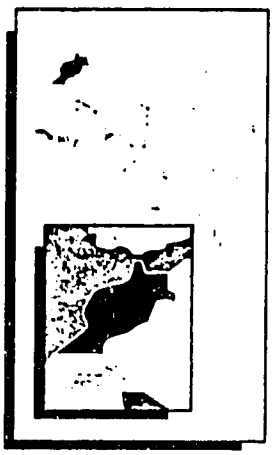


Vaccination Coverage Data



Kingdom of Morocco

How USAID Helps



Demographic Indicators

Total Population: 24,521,000 (89)

Infant Mortality Rate: 73/1,000 (87)

Life Expectancy at Birth: 61 Years (89)

Children Under 1: 796,000 (89)

Annual Infant Deaths: 61,000 (89)

Total Fertility Rate: 4.6 Children (87)

Child Survival Indicators

Immunization Coverage:
DPT3: 92% (89)
Polio3: 92% (89)
Measles: 92% (89)
BCG: 99% (89)
Tetanus2+: 58% (89)

Oral Rehydration Therapy:
ORS Access Rate: 61% (88)
ORT Use Rate: 45% (88)

Contraceptive Prevalence: 29% (87)

Adequate Nutritional Status: 80% (87)

Appropriate Infant Feeding: 47% (87)
Exclusively Breastfed: 42%
Introduction of Solids: 43%

Duration of Breastfeeding: 15.2 Months (87)

See Data Notes

USAID Child Survival and Health Fact Sheet
USAID Health Information System
CIHI, March 1990

Morocco Highlights

- Vaccination coverage in Morocco has surpassed the global goal of 80 percent coverage: Ninety-nine percent of children 12 to 23 months of age are protected against tuberculosis; and 92 percent are fully vaccinated against measles, diphtheria, whooping cough, tetanus and polio. Some 58 percent of women are protected against tetanus.

- The Maghrebian Vaccination Campaign, initiated by His Majesty King Hassan II and lead by Morocco in October 1989, was successful. All levels of the community were mobilized including key political, community and religious leaders, teachers and health care workers. A campaign logo was designed using the hand of Fatima, the flags of the Maghrebian countries and a stylized symbol of a woman and her child. This logo was widely distributed in posters and stickers and is recognized throughout Morocco.

- The Ministry of Public Health (MOPH) recently completed a National Infant and Child Mortality Survey using the verbal autopsy method. The study provided detailed data on the leading causes of infant and child death and disability in Morocco. The survey also determined some of the underlying factors such as failure to seek treatment, insufficient vaccination coverage of women, lack of prenatal care and undetected or untreated malnutrition, that may have contributed to the deaths. These data will be extremely valuable in retargeting and improving child survival interventions.

Bilateral Project

- **Population and Family Planning Support III** is a comprehensive national maternal and child health and family planning enterprise funded by USAID and implemented and managed by the MOPH. The project's five key child survival interventions focus on birth spacing and family planning, immunization, diarrheal disease and oral rehydration therapy, nutrition, including breastfeeding, growth monitoring and appropriate weaning practices, and prenatal and delivery care. His Majesty Hassan II and H.R.H. Princess Lalla Meriam, the King's daughter played important roles in national immunization campaigns. A regional vaccination campaign for the Maghreb countries (Algeria, Libya, Mauritania, Morocco and Tunisia) proposed by His Majesty Hassan II last spring took place in October. The MOPH recently completed a National Infant and Child Mortality Survey, one of the first such national surveys in the world (See "Morocco Highlights" above). USAID provided technical and financial assistance for the survey, which identifies leading causes of death and major underlying contributing factors. USAID also partially funded survey research related to national vaccination coverage. A nutrition guide for use by MOPH field staff was also developed.

In September 1989, the project initiated a program called PROTEX, which promotes the use of condoms using social marketing strategies through pharmacies nationwide. The theme of the program is "Family Planning is also a Man's Responsibility." During 1989, USAID launched a new six-year, U.S. $31.5 million project, Population and Family Planning Support IV, which continues the support to Morocco's national integrated mother and child health and family planning program. The new project extends the scope of outreach efforts which provide maternal and child health services and family planning services.

USAID/Washington Support

Bureau for Science and Technology Support

- **AIDSTECH** in providing support for health professionals to attend an international AIDS conference and in a needs assessment for possible AIDS prevention and control programs.

- **ORT Help** in training Peace Corps Volunteers in child survival interventions.

- **TAACS** (Technical Advisors in AIDS and Child Survival) provided long-term technical assistance in clinical and training aspects of child survival, and short-term technical assistance in developing a survey instrument to be used with the national census to measure causes of infant mortality.

- **VBC** (Vector Biology and Control) in the safety of organophosphate insecticides for malaria control.

- **WHO Global Programme on AIDS** in training on AIDS for MOPH medical and paramedical staff.

- **WASH** (Water and Sanitation for Health) in planning of a sewerage for the municipality of Tetouan.

Morocco
Funding for USAID Bilateral Projects Related to Health
FY 1985 - FY 1991
($000)

Project Title	Project #	Total LOP Authorized(1)	Annual Obligations (2)						
			FY85	FY86	FY87	FY88	FY89	FY90	FY91
Health Management Improvement	6080151	2,685	500						
Family Planning Support III	6080171	27,210		2,000	1,500	1,500			
Sector Support Training	6080178	300							
Family Planning Support IV	6080198	31,125					2,100	2,325	1,000
Health Care Financing	6080207	8,000							2,500
TOTAL		69,320	500	2,000	1,500	1,500	2,100	2,325	3,500

(1) Dollar amount is the approximate total authorized life of project funds for the entire project and not an amount allocated to a specific component of the project.

(2) Funding is based on reported attributions for health, child survival and AIDS activities from all funding accounts.

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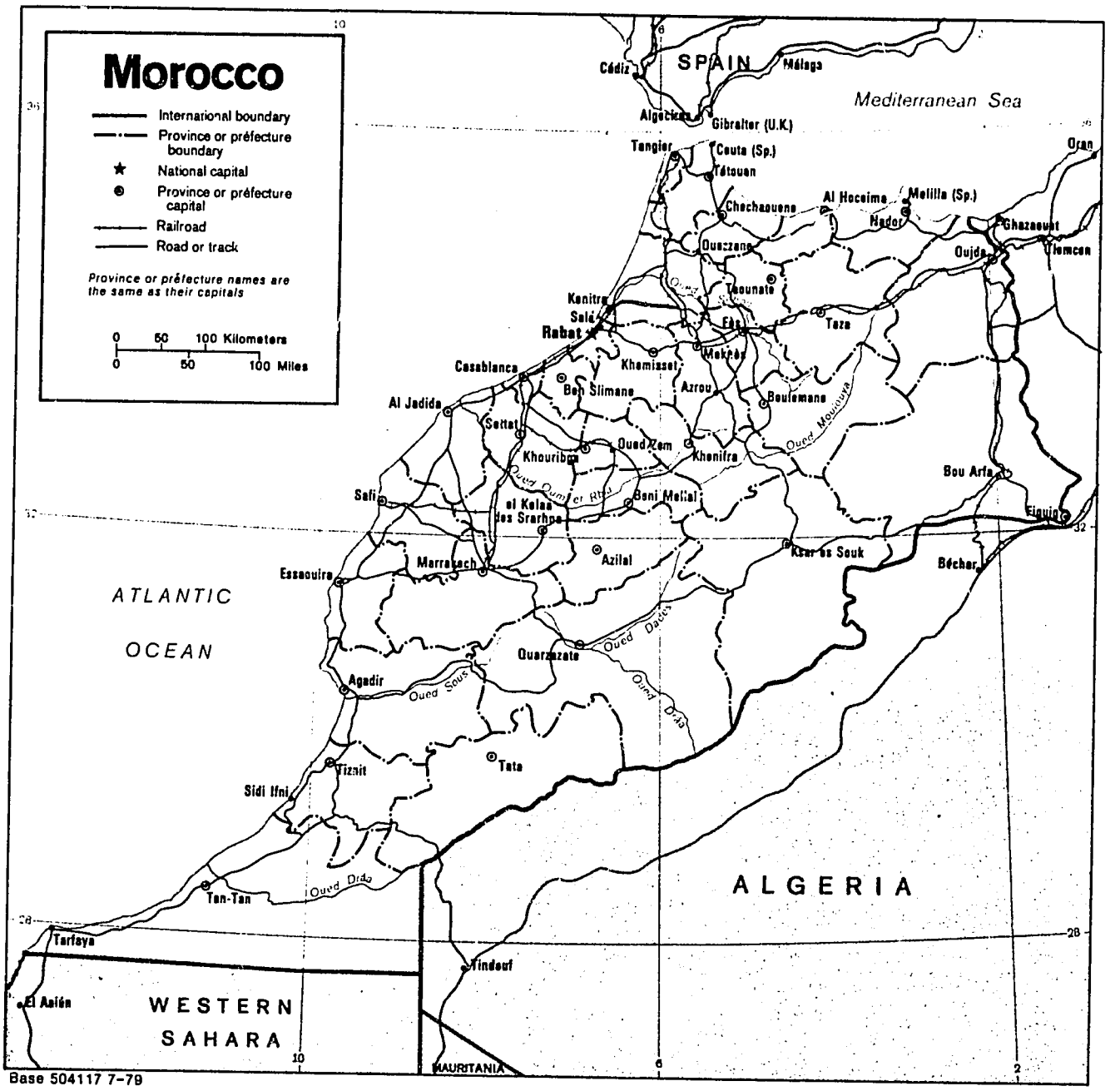
Central and Regional Health Projects Active in Morocco

	FY87	FY88	FY89
Centrally-Funded Projects:			
AIDS Technical Support (AIDSTECH)		X	X
CSAP-Support		X	
Demographic and Health Surveys (DHS)		X	X
PRITECH	X	X	
REACH	X	X	
Technical Advisors in Child Survival (TACS)		X	X
Vector Biology and Control (VBC)		X	X
WASH			X
WHO Global Programme on AIDS			X
Regional Project	X	X	

Source: Third, Fourth and Fifth Reports to Congress on the USAID Program in Child Survival (Morocco Fact Sheet and Region "Matrix")


Morocco
International boundary
Province or préfecture boundary
National capital
Province or préfecture capital
Railroad
Road or track
Province or préfecture names are the same as their capitals
0 50 100 Kilometers
0 50 100 Miles
SPAIN
Cádiz
Málaga
Mediterranean Sea
Algeciras
Gibraltar (U.K.)
Tangier
Ceuta (Sp.)
Tétouan
Oran
Chechaouene
Al Hoceima
Melilla (Sp.)
Nador
Ghazaouat
Tlemcen
Oujda
Ouezzane
Taounate
Kenitra
Salé
Rabat
Fès
Taza
Casablanca
Khemisset
Meknès
Ben Slimane
Azrou
Beni Mellal
Al Jadida
Settat
Oued Zem
Khouribga
Khenifra
Oued Moulouya
Bou Arfa
Safi
Oued Oumer Rbia
el Kelaa des Srarhna
Figuig
Azilal
Kasr es Souk
Essaouira
Marrakech
Béchar
ATLANTIC
OCEAN
Oued Dades
Quarzazate
Agadir
Oued Sous
Oued Drâa
Tata
Tizniit
Sidi Ifni
Tan-Tan
Oued Drâa
ALGERIA
Tarfaya
Tindouf
El Aaiún
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