Chapter 5. United Arab Emirates

Crest of the United Arab Emirates

Country Profile

Country

Formal Name: United Arab Emirates.

Short Form: UAE.

Term for Citizens: No generally accepted term.

Capital: Abu Dhabi.

Date of Independence: December 2, 1971.

Geography

Size: Approximately 77,700 square kilometers (excluding islands), but land borders undemarcated.

Topography: Largely flat or rolling desert, although mountains in northeast.

Climate: Hot and dry in desert regions; frequent high humidity along Persian Gulf coast.

Boundaries: Land boundaries with Oman, Qatar, and Saudi Arabia mostly undefined; several internal boundaries subject of disputes between and among seven constituent amirates.

Society

Population: Estimated at 2.0 million in mid-1993; 1993 growth rate 5.1 percent. Foreigners, of whom majority male workers, accounted for 88 percent of population.

Education: In 1990–91 academic year, more than 388,000 students (half of them female) attended primary and secondary schools. Education compulsory at primary level and free at all levels. Most of 22,000 teachers and administrators foreigners. In 1990–91 academic year, more than 8,900 students, of whom 65 percent women, attended United Arab Emirates University.

Note—The Country Profile contains updated information as available.

Health: Comprehensive public health care system, free for citizens but charges for some services provided foreigners. Majority of medical personnel foreigners, primarily from Egypt, India, and Pakistan. In 1990 life expectancy at birth 68.6 years for males and 72.9 years for females.

Ethnic Groups: Almost all citizens indigenous Arabs. Foreign population included other Arabs (especially Egyptians, Omanis, Palestinians, and Yemenis), Indians, Pakistanis, and Iranians.

Religion: Most citizens Sunni Muslims. About 60 percent of foreign population Sunnis; 20 percent Shia Muslims; 20 percent Hindus, Christians, and other.

Economy

Gross Domestic Product (GDP): US$34.9 billion in 1992, about US$14,000 per capita.

Oil Industry: Contribution of petroleum sector to GDP dropped from 63 percent in 1980 to 47 percent in 1990. Petroleum products accounted for 79 percent of exports in 1990. Abu Dhabi had largest reserves and most of production. Crude oil production in 1992 averaged 2.3 million barrels per day.

Industry: Oil refining and gas processing most important, followed by petrochemicals, utilities, and cement, all using oil or gas as fuel and feedstock. Government owned at least one-half interest in these plants. Non-oil manufacturing constituted 7.3 percent of GDP in 1990. Dubai Dry Docks one of world's largest and most modern. Majority of industrial workers foreigners.

Agriculture and Fishing: Represented less than 2 percent of GDP in 1990. Production mostly vegetables, fruit, livestock, and poultry. Water shortages restrict farming. Fishing industry being developed.

Exports: US$23.4 billion in 1992, of which US$14.0 billion oil and gas. Remainder largely propane and butane and reexports. Japan, Singapore, and Republic of Korea (South Korea) primary petroleum markets.

Imports: US$11.2 billion in 1990. Principal imports manufactured goods, machinery, transportation equipment, food, and live animals. Japan, United States, and Western

Europe major sources of imports.

Currency and Exchange Rate: UAE dirham. In 1994 exchange rate US$1 = Dh3.67 (fixed rate).

Fiscal Year: Calendar year.

Transportation and Telecommunications

Transportation: About 2,000 kilometers of roads, of which 1,800 kilometers paved as of 1993. Principal road is highway from Ash Sham via all main coastal cities to Qatar and Saudi Arabia. Dubayy major regional and international sea and air traffic center. UAE has several ports, of which largest is Mina Jabal Ali near city of Dubayy. Dubayy has major international airport, but Abu Dhabi, Al Fujayrah, Ras al Khaymah, and Sharjah also have international airports.

Telecommunications: International telecommunications excellent via satellites, radio relay, and telephone. All populated areas receive radio and television transmissions.

Government and Politics

Government: Federation of seven amirates, as defined in 1971 provisional constitution. Powers divided between federal and amirate governments. Head of state is UAE president, Shaykh Zayid ibn Sultan Al Nuhayyan, chosen by Supreme Council of the Union composed of rulers of seven amirates. Federal National Council has consultative function.

Politics: No political parties. Amirs and their families, particularly those of Abu Dhabi and Dubayy, most important political actors; technocrats and commercial interests play lesser role.

Foreign Relations: Member of United Nations, League of Arab States, Organization of the Islamic Conference, Gulf Cooperation Council, Organization of the Petroleum Exporting Countries, and Organization of Arab Petroleum Exporting Countries.

National Security

Armed Forces: Known as Union Defense Force. In mid-1993 personnel strength 57,500: army, 53,000; navy, 2,000; and air force, 2,500. Army uses French and Italian main battle tanks and wide assortment of other armored vehicles. In addition to several gun boats, navy operates six Exocet-equipped guided missile boats. Combat aircraft include Mirages, Hawks, and Aeromacchi MB–326s.

THE UNITED ARAB EMIRATES (UAE) in 1993 was a federation of seven separate amirates that had joined together in the winter of 1971–72 to form a single independent country. The new nation was created out of the British dependencies that had been known as the Trucial Coast states (also seen as Trucial Oman or Oman Coast) since 1853 when Britain and the local rulers signed the Treaty of Maritime Peace in Perpetuity, an agreement that ceded to London responsibility for foreign affairs. The individual amirates of the UAE include Abu Dhabi (also seen as Abu Zaby), Ajman, Al Fujayrah, Dubayy (also seen as Dubai), Ras al Khaymah, Sharjah (also seen as Ash Shariqah), and Umm al Qaywayn.

The UAE's oil resources make it one of the wealthiest countries in the world. The oil and the revenues it generates, however, are not equitably distributed. Revenues from petroleum exports accrue principally to the government of Abu Dhabi, where more than 80 percent of the oil is located. Three other amirates—Dubayy, Ras al Khaymah, and Sharjah—account for the remainder of the UAE's oil production. Nevertheless, since the formation of the UAE, Abu Dhabi has made significant annual contributions to the federal budget. Federal expenditures on development projects in the amirates lacking oil enable them to benefit, albeit modestly, from the overall oil wealth.

The UAE's oil-fueled economic growth has been accomplished with the assistance of thousands of foreign workers. Citizens composed only 12 percent of the 2.0 million people living in the UAE in 1993 and constituted only 7 percent of the labor force. The foreign workers come from other Arab countries and from Afghanistan, Bangladesh, Britain, India, Iran, Pakistan, the Philippines, Sri Lanka, Thailand, Turkey, the United States, and Western Europe. The presence of such a large and diverse foreign community provides a cosmopolitan atmosphere in the cities of Abu Dhabi and Dubayy. However, throughout the 1980s, there was growing resentment of foreigners among many UAE citizens, who felt uncomfortable being a minority, although a very privileged one, within their own country.

The rulers have been conscious that their country's small size and population, combined with relatively large oil revenues, make the UAE vulnerable in the context of regional politics. During the 1980s, the UAE tried to maintain its neutrality in the Iran-Iraq War (1980–88) by providing modest loans for the Iraqi war effort and permitting Dubayy to serve as a major port of entry for goods being transshipped to Iran. The UAE also joined the Gulf Cooperation Council (GCC), a collective security and cooperation association, established in 1981, of the six oil-producing Arabian Peninsula states. After Iraq invaded and occupied fellow GCC member Kuwait in 1990, the UAE joined the international military coalition that opposed and eventually defeated Iraq. In 1992 tensions with Iran over disputed islands in the Persian Gulf induced the UAE to expand its military cooperation with the United States.

Geography

The UAE lies between 22°50' and 26° north latitude and between 51° and 56°25' east longitude. It shares a nineteen-kilometer border with Qatar on the northwest, a 530-kilometer border with Saudi Arabia on the west, south, and southeast, and a 450-kilometer border with Oman on the southeast and northeast. The land border with Qatar is one over which in 1993 the UAE continued to have a dispute in the Khawr al Udayd area. The total area of the UAE is approximately 77,700 square kilometers. The country's exact size is unknown because of disputed claims to several islands in the Persian Gulf, because of the lack of precise information on the size of many of these islands, and because most of its land boundaries, especially with Saudi Arabia, remain undemarcated. The largest amirate, Abu Dhabi, accounts for 87 percent of the UAE's total area (67,340 square kilometers). The smallest amirate, Ajman, encompasses only 259 square kilometers (see fig. 11).

The UAE stretches for more than 1,400 kilometers along the southern shore of the Persian Gulf. Most of the coast consists of salt pans that extend far inland. The largest natural harbor is at Dubayy, although other ports have been dredged at Abu Dhabi, Sharjah, and elsewhere. Numerous islands are found in the gulf, and the ownership of some of them has been the subject of international disputes with both Iran and Qatar. The smaller islands, as well as many coral reefs and shifting sandbars, are a menace to navigation. Strong tides and occasional windstorms further complicate ship movements near the shore.

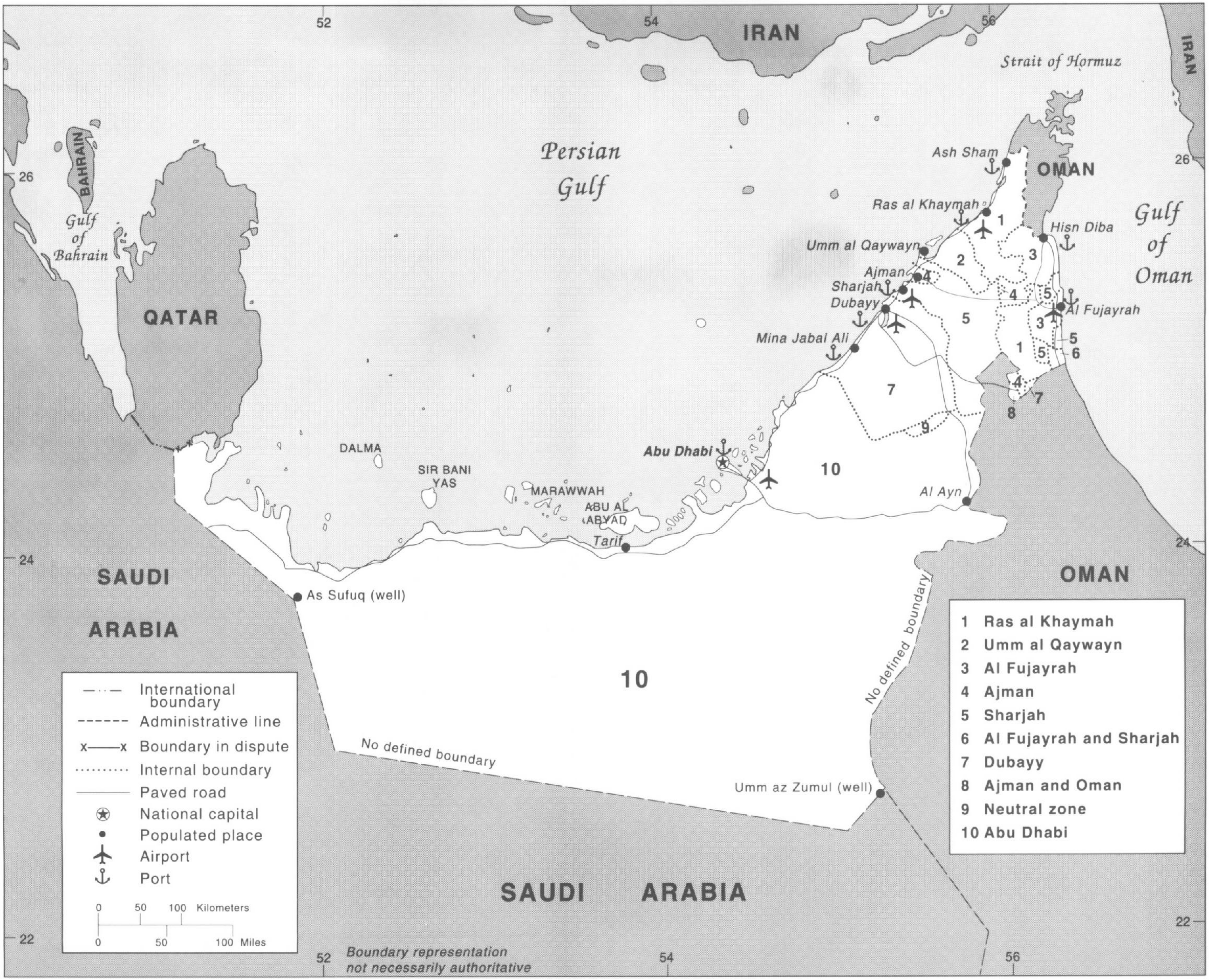


Figure 11. United Arab Emirates, 1993

The UAE also extends for about ninety kilometers along the Gulf of Oman, an area known as the Al Batinah coast. The Al Hajar al Gharbi (Western Al Hajar) Mountains, rising in places to 2,500 meters, separate the Al Batinah coast from the rest of the UAE. Beginning at the UAE-Oman border on the Persian Gulf coast of the Musandam Peninsula (Ras Musandam), the Al Hajar al Gharbi Mountains extend southeastward for about 150 kilometers to the southernmost UAE-Oman frontier on the Gulf of Oman. The range continues as the Al Hajar ash Sharqi (Eastern Al Hajar) Mountains for more than 500 kilometers into Oman. The mountain slopes tend to run right to the shore. Nevertheless, there are small harbors at Diba al Hisn, Kalba, and Khawr Fakkan on the Gulf of Oman. In the vicinity of Al Fujayrah, where the mountains do not approach the coast, there are sandy beaches.

South and west of Abu Dhabi, vast, rolling sand dunes merge into the Rub al Khali (Empty Quarter) of Saudi Arabia. The desert area of Abu Dhabi includes two important oases with adequate underground water for permanent settlements and cultivation. The extensive Al Liwa Oasis is in the south near the undefined border with Saudi Arabia. About 200 kilometers to the northeast of the Al Liwa Oasis is the Al Buraymi Oasis, which extends on both sides of the Abu Dhabi-Oman border.

Prior to withdrawing from the area in 1971, Britain delineated the internal borders among the seven amirates in order to preempt territorial disputes that might hamper formation of the federation. In general, the rulers of the amirates accepted the British intervention, but in the case of boundary disputes between Abu Dhabi and Dubayy, and also between Dubayy and Sharjah, conflicting claims were not resolved until after the UAE became independent. The most complicated borders were in the Al Hajar al Gharbi Mountains, where five of the amirates contested jurisdiction over more than a dozen enclaves.

The climate of the UAE generally is hot and dry. The hottest months are July and August, when average maximum temperatures reach above 48°C on the coastal plain. In the Al Hajar al Gharbi Mountains, temperatures are considerably cooler, a result of increased altitude. Average minimum temperatures in January and February are between 10°C and 14°C. During the late summer months, a humid southeastern wind known as the *sharqi* makes the coastal region especially unpleasant. The average annual rainfall in the coastal area is fewer than 120 millimeters, but in some mountainous areas annual rainfall often reaches 350 millimeters. Rain in the coastal region falls in short, torrential bursts during the summer months, sometimes resulting in floods in ordinarily dry wadi beds. The region is prone to occasional, violent dust storms, which can severely reduce visibility.

Population

A harsh environment and marginal economic conditions kept the population of the region low and economically depressed until the exploitation of oil. According to estimates, between 1900 and 1960 there were 80,000 to 95,000 inhabitants in the amirates, mostly in small coastal settlements. Although the population of the amirates probably did not increase a great deal during this period, there were considerable shifts within the territories, caused by changes in economic and political conditions. Whereas Sharjah was dominant in the nineteenth century, by 1939 Dubayy was the most populous amirate, with an estimated population of 20,000, one-quarter of whom were foreigners. The largest minorities were Iranians and Indians in Dubayy and in other amirates. Abu Dhabi's onshore oil exports began in 1963, bringing wealth and a demand for foreign labor. The 1968 census, conducted under the British, was the area's first; it enumerated 180,226 inhabitants. Ever greater demands for labor and expertise fueled a population boom throughout the 1970s and early 1980s, but population growth has slowed since 1985.

The UAE had an officially estimated population of nearly 2.0 million in early 1993. Only about 12 percent of the total actually were UAE citizens. The number of foreign workers has increased dramatically since 1968, when they constituted 36 percent of the total population. By 1975 foreigners accounted for 70 percent of the population, increasing to 80 percent in 1980 and to 88 percent in 1985. Since 1985, the percentage of foreigners has leveled at 88 percent. Asian workers from the Indian subcontinent (Bangladesh, India, Pakistan, and Sri Lanka) constituted about 45 percent of the total population in 1993. Iranians, who accounted for an estimated 17 percent of the population, were the next largest ethnic group. Non-UAE Arabs, primarily Egyptian nationals, accounted for 13 percent of the population. Other Asians and Africans made up 8 percent of the population, and foreigners from Europe and North America accounted for 5 percent.

Although the population density was about twenty-five persons per square kilometer in 1991, the population was unevenly distributed among the seven amirates. The three most populous amirates—Abu Dhabi, Dubayy, and Sharjah—together accounted for roughly 84 percent of the total population. The remaining 16 percent lived in Ras al Khaymah, Ajman, Al Fujayrah, and Umm al Qaywayn (see table 25, Appendix).

The population of the UAE is overwhelmingly urban, with more than 90 percent of the people living in cities. The largest city, Abu Dhabi, the federal capital, had an estimated population of 530,000 in 1993. Dubayy, the second largest city and the UAE's main port and commercial center, had an estimated population of 402,000. The residential neighborhoods along the Persian Gulf coast north of the center of Dubayy were contiguous with those of the city of Sharjah (estimated population of 130,000). Sharjah in turn flowed into the city of Ajman (estimated population of 60,000). About fifty kilometers north of Ajman is the city of Ras al Khaymah (estimated population of 45,000). The largest inland population concentration is in the contiguous villages and residential developments at Al Ayn (estimated population of 105,000) in Abu Dhabi's Al Buraymi Oasis.

Religion

Most of the citizens of the UAE are Sunni (see Glossary) Muslims who adhere to the Maliki legal tradition (see Sunni Islam, ch. 1). Some Sunnis of the Wahhabi sect (followers of a strict interpretation of the Hanbali legal school) live in the Al Buraymi Oasis, and some who follow the Shafii legal school live along the Al Batinah coast. The foreign population includes Sunni and Shia (see Glossary) Muslims, Hindus, and Christians.

Although varying from amirate to amirate, the degree of religious freedom afforded non-Muslims is greater in the UAE than in Saudi Arabia and Qatar. For example, non-Muslims are permitted to worship but not to proselytize. There are several large Christian churches and schools in the UAE, primarily in Dubayy and Abu Dhabi.

Education

In the early 1900s, three major schools were established by pearl merchants in Dubayy, Abu Dhabi, and Sharjah. The schools were staffed by foreign teachers who taught reading, writing, and Islamic studies. The economic crises of the 1920s and 1930s forced some of these and other schools to close, but some reopened when the economy improved.

The British built the first school offering a comprehensive curriculum in Sharjah in 1953. Staffed by teachers from other Arab countries, the school had 450 boys between the ages of six and seventeen that year. Shortly after, the first modern primary school for girls was established in Sharjah. The British government also built schools in Abu Dhabi, Ras al Khaymah, and Khawr Fakkan and established an agricultural school in Ras al Khaymah in 1955 and a technical school in Sharjah in 1958. In 1958 Kuwait started to build schools in the amirates, including facilities in Ajman and Umm al Qaywayn. Kuwait also funded teacher trainees from the amirates to go abroad for training. Until the amirates could afford to pay teachers, Bahrain, Qatar, and Egypt paid teachers to work in the amirates.

After Abu Dhabi began earning oil revenues in the early 1960s, it developed and funded its own educational system, while the other amirates continued to rely on outside assistance. By the 1964–65 academic year, Abu Dhabi had six schools attended by 390 boys and 138 girls, taught by thirty-three teachers. In the same year, there were thirty-one schools outside Abu Dhabi, twelve of which were for girls. Dubayy had 3,572 students in ten schools and 137 teachers, most of whom came from Kuwait and Egypt.

After the founding of the UAE, there was tremendous expansion of public education facilities. Section 17 of the constitution states that education is fundamental to the progress of society and is to be compulsory at the primary level and free at all levels. Uniforms, books, equipment, and transportation are also free. In the first seven years of the UAE's existence, education was second only to defense in the federal budget. In 1989 the budget allocated Dh2.0 billion (for value of the the UAE dirham—see Glossary) for education.

The education system in the UAE includes six years of primary school and six years of secondary school (see table 26, Appendix). By 1972–73, the first full academic year following the formation of the UAE, the government operated an estimated 140 schools, twelve of which offered boarding facilities.

Most schools are segregated according to gender, but some through the primary level are coeducational. In 1990–91 there were about 760 schools with 49,904 pupils in preschool, 227,083 students in primary school, and 111,611 in secondary school. One-third of the pupils attended private or religious schools. Beginning in the 1991–92 academic year, military courses were compulsory in federal secondary schools.

United Arab Emirates University opened in 1977 at Al Ayn with four faculties: arts, science, education and political science, and business administration. First-year enrollment was 400. A sharia (Islamic jurisprudence) faculty was added in 1978; faculties in agriculture and engineering were added in 1982. In 1988 four higher colleges of technology (two for men and two for women) opened. By the 1990–91 academic year, enrollment stood at 8,941 students. In the previous academic year, 65 percent of university students were women. Many UAE nationals go abroad for university and graduate studies to other Arab countries and to Britain and the United States.

In the early 1990s, United Arab Emirates University was being expanded, at an estimated outlay of Dh3 to Dh5 billion, to accommodate up to 16,000 students by the year 2000. The existing campus will become a technical college after the expansion is completed.

The Women's Federation of the UAE provides adult literacy classes. There were twenty-six adult education centers in 1992. The United Nations (UN) estimated the UAE's literacy rate in 1988–89 as 53.5 percent overall, 58.4 percent for males and 38.1 percent for females. The government also operates several vocational training centers, which in the 1987–88 academic year had 2,614 students.

Status of Women

The role of women in UAE society has gradually expanded since the discovery of oil. Before 1960 there were few opportunities for them outside the realm of home and family. The president, Shaykh Zayid ibn Sultan Al Nuhayyan, has acknowledged the validity of women participating in the work force as well as in the home. The president's wife, Shaykha Fatima, heads the Women's Federation and promotes training, education, and the advancement of the status of women. In the early 1990s, there were five women's societies promoting various issues of importance to women, including literacy and health.

Women constituted 6.2 percent of the work force in 1988. A study by the Administrative Development Institute found that a majority of female workers who are UAE citizens work under the Ministry of Education and the Ministry of Health. In 1988 they accounted for 82 percent of UAE national employees in these ministries. Since the late 1980s, women graduates have outnumbered men by a ratio of two to one at United Arab Emirates University.

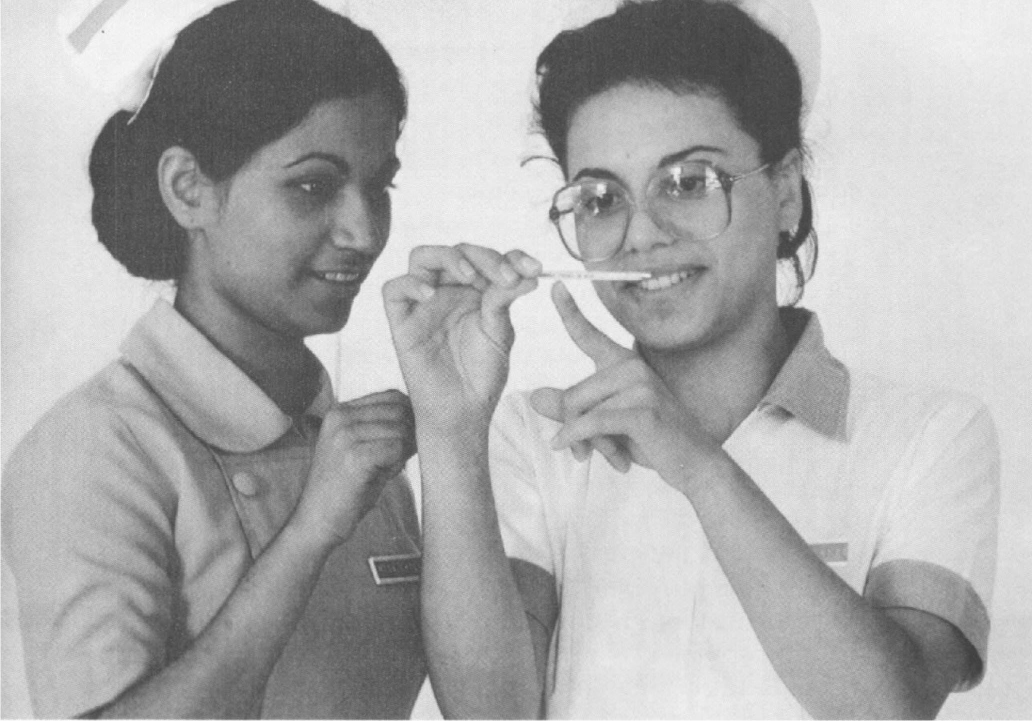
Health and Welfare

In the years before the discovery of oil, the health situation in the amirates was poor. Those who could afford it obtained modern treatment abroad; those who could not had to make do with traditional remedies. Britain became interested in the region's welfare when it perceived that the United States would gain local influence in the scramble for oil through the successes of United States missionary doctors, who, in Muscat and Bahrain, operated the only hospitals in the region. As a result, in 1938 Britain appointed a medical officer for the Trucial Coast and sent an Indian physician to serve in a dispensary in Dubayy the following year.

In 1949 the British government built Al Maktum Hospital, a small hospital in Dubayy, and appointed a British physician from the Indian Medical Service to initiate modern medical service. Contributions to health care also came from Kuwait, Iran, and the Trucial States Development Fund. Earlier suspicions by the British notwithstanding, in the 1950s and 1960s American Mission hospitals were established in Sharjah, Al Ayn, and Ras al Khaymah.

In 1965 the Abu Dhabi government employed one physician; three others were in private practice. The amirate also received technical and material assistance from Egypt. After federation in 1971, rapid, uncoordinated growth characterized the health system. Although cooperation among amirates in the health field had improved by the early 1990s, oil companies and the military continued to have their own medical facilities.

All residents received free medical care until 1982. In that year, escalating costs, shrinking oil revenues, and a change in attitude toward foreign residents caused the UAE to begin charging noncitizens for all services except emergency and child and maternity care.



Student nurses at Abu Dhabi nursing school; the United Arab Emirates has stressed academic and professional education.
Courtesy Embassy of the United Arab Emirates, Washington

In 1985 there were 2,361 physicians, 6,090 nurses, 242 dentists, and 190 pharmacists, almost all of whom were foreigners. In 1986 the UAE had forty public hospitals with 3,900 beds and 119 clinics. In 1990 life expectancy at birth was 68.6 years for males and 72.9 years for females. The major causes of death registered in Abu Dhabi in 1989 per 100,000 population were accidents and poisonings, 43.7; cardiovascular diseases, 34.3; cancer, 13.7; and respiratory diseases, 8.1. As of December 1990, eight cases of acquired immune deficiency syndrome (AIDS) were reported in the UAE. Infant mortality declined dramatically from 103 per 1,000 live births in 1965 to twenty-three per 1,000 live births in 1990. In 1985 a health worker attended 96 percent of births.

In the early 1990s, the UAE had a modern health care system with facilities and professionals capable of providing excellent care and performing advanced procedures such as organ transplants and complex heart surgery. Although facilities are concentrated in the cities of Abu Dhabi and Dubayy, most of the population has access to at least basic facilities. The federation's first hospital specializing in pediatric and maternity care, the 374-bed Al Wasl Hospital in Dubayy, opened in the late 1980s. The New Medical Centre in Abu Dhabi, a private facility, is equipped to treat diving accidents. Most hospitals are run by the government.

The UAE also has created an extensive social welfare network that includes family care centers aimed at solving domestic problems and training women in domestic skills and handicrafts. Psychological care is available for troubled youths. The National Assistance Law provides benefits to victims of catastrophic illnesses and disasters. Widows, orphans, the elderly, the disabled, and others unable to support themselves receive social security payments. In 1975 nearly 24,000 citizens benefited from Dh87.7 million in such social aid; in 1982 approximately 121,000 persons received a total of Dh275 million.

Other benefits given UAE citizens are free housing and subsidized furnishings. However, the Ministry of Public Works and Housing reported in 1992 that 70 percent of 15,000 government-built low-income houses had deteriorated to the point of being uninhabitable. Among the causes were damage from groundwater salinity, failure to grant proprietary rights, and withdrawal of a Dh10,000 per house maintenance grant.

Economy

Before the discovery of oil, the separate amirates that now constitute the UAE had similar economies. The raw materials of these economies were the fish and pearls of the gulf and the meager soil and scarce water onshore. In this forbidding milieu, the rich and poor fought heat, disease, and famine to make a living. Occupations ranged from slaves who dived for pearls and artisans who hammered coffee pots or stitched sandals to wealthy pearl merchants and powerful shaykhs. Among the sources of revenue for ruling shaykhs were the collection of customs fees, the issuance of fishing licenses, and the imposition of levies on date groves. Pearl merchants, many of whom were also landholders and moneylenders, gained political influence through their wealth and connections. In addition, there were cultivators of dates in oases, nomadic livestock herders, and small-scale traders.

Pearls from the rich banks off the amirates' coast were probably the single largest source of wealth until the 1930s and 1940s. In 1905 the pearling trade involved 22,000 men from the amirates working in about 1,300 boats, and income amounted to £600,000. Trade and fishing were also important maritime activities. Sharjah, the principal port and political power in the nineteenth century, was in the twentieth century eclipsed by Dubayy. A large boatbuilding industry, using timber imported from India, developed along the coast; the industry supplied vessels of varying sizes and designs for pearling, fishing, and transport. The Great Depression of the 1930s, coinciding with the development of the Japanese cultured pearl industry, severely disrupted markets for Persian Gulf pearls. At about the same time, large numbers of men from the amirates began to migrate to work in the fledgling oil industries of Kuwait, Bahrain, and later Qatar and Saudi Arabia.

Agriculture is limited to those few locations where fresh water is available. In the Al Buraymi and Al Liwa oases and the plains of Ras al Khaymah, relatively abundant water resources permit settled agriculture, especially the cultivation of date palms and fodder crops. The wells of the oases also provide water for the nomadic population, who migrate with their animal herds throughout the desert areas in search of seasonal forage.

British hegemony in the Persian Gulf had positive and negative economic consequences for the inhabitants. British suppression of maritime raiding, for example, meant that pearling fleets could operate in relative security. (The fleet had previously been unable to sail during periods of unrest, losing vital income for divers and merchants alike.) Some shaykhs and merchants benefited from regular visits by steamships from Britain and from other countries. For a period of time, local Indian merchants received deferential treatment as a result of Britain's control of India. On the negative side, however, the British prohibition on raiding and trading in slaves and arms meant an important source of income was lost to some shaykhs and merchants. In addition, because non-British powers were kept out of the gulf, trade and development opportunities were lost.

British development assistance began piecemeal in the 1940s and 1950s, prompted by fears that the United States and other countries would gain a foothold in the region and compete for oil concessions. Total outlays in 1954–55 were £50,300 and funded a water resources study, an irrigation restoration project, improvements at the hospital in Dubayy, and school construction in Sharjah. In 1961–62 the amount rose to £550,000. The total British investment between 1955 and 1965 was £1 million. Neighboring Qatar provided a freshwater system for Dubayy and the first bridge across Dubayy Creek. Saudi Arabia built a road from Sharjah to Ras Al Khaymah. Britain also paid Sharjah's ruler to allow the establishment of a military base there in 1966.

Trade began to grow, especially in Dubayy, in the 1950s and 1960s. Imports increased from £3 million in 1958 to £8 million in 1963 and £41.7 million in 1967. Gold, often smuggled into India, greatly enriched Dubayy merchants and bankers during this period. An estimated 250 tons of gold brought revenues of about £80 million in 1970.

The discovery and export of petroleum resulted in a major transformation of the amirates' economies. Before federation, oil revenues enriched the royal families who ruled the amirates in which production occurred and provided funding for local economic development. After the formation of the UAE, oil revenues, especially from Abu Dhabi and Dubayy, continued to fuel local development but increasingly became the main engine of growth for the national economy.

Oil revenues became significant in Abu Dhabi in 1963, in Dubayy in 1970, in Sharjah in 1975, and in Ras al Khaymah in 1984. The disparity in resource endowment and timing of oil discoveries led to uneven economic development before and after federation. The governments of Abu Dhabi and Dubayy, which together in 1991 accounted for 99 percent of the UAE's production, expend significant portions of their oil revenues on infrastructure development, including airports, highways, and port facilities. Nonetheless, Abu Dhabi's economic predominance has created tensions with the other amirates. Lack of coordination in economic development and duplication in facilities and industries are problems that political federation had not solved as of 1993.

The rapid pace of development brought other problems. In the early and mid-1970s, the distribution system could not keep up with the massive amounts of imports. Shortages resulted, and inflation exceeded 30 percent per year. By 1982, however, the rate of inflation had declined to about 10 percent. Between 1975 and 1980, the gross domestic product (GDP—see Glossary) in constant 1980 prices increased by an average of 16 percent per year. Although oil production declined after 1977, sharp increases in world oil prices in the 1979–80 period brought windfall revenues to the amirates, pushing per capita GDP up to US$29,000 in 1981, one of the world's highest.

During the early 1980s, the economy began to contract. This economic slowdown was caused by several factors, including lower oil revenues, the completion of several large industrial

Offshore oil rig; oil is the major revenue source of the United Arab Emirates. Courtesy Embassy of the United Arab Emirates, Washington

Mina Jabal Ali, southwest of Dubayy, a major port engaged in the transshipment trade Courtesy Embassy of the United Arab Emirates, Washington

and infrastructure projects, and the Iran-Iraq War (1980–88). By 1983 GDP had fallen to an estimated US$26.7 billion, down from US$32.5 billion in 1981.

The mid-1980s were a period of recession, with GDP falling from a little less than US$29 billion in 1982 to US$21.5 billion in 1986, caused in large part by a 40 percent drop in oil revenues. Exports fell by 33.5 percent in 1986, and the federation's trade surplus dropped 58 percent compared with 1985. As a result of the austere conditions, the 1986 federal budget allocated funds mainly for current expenditures, stalling many new projects.

The late 1980s and early 1990s saw improving conditions, with oil exports increasing. A spurt in oil prices as a result of Iraq's invasion of Kuwait helped push GDP to almost US$34 billion in 1990. Contracts to help rebuild Kuwait after its liberation aided the UAE economy. But the invasion also had negative effects. Banks lost between 15 and 30 percent of their deposits, and development projects were halted. Trade declined as a result of uncertainty and higher insurance premiums. And the UAE paid out about US$6 billion to the United States and Britain to help defray the military costs of the war and to contribute to a fund that supported countries whose economies were severely hurt by the war.

The collapse of the Bank of Credit and Commerce International (BCCI) in the summer of 1991 caused ripples throughout the UAE economy (see Banking, ch. 6). The BCCI collapse became a major international scandal because the bank had become a significant financial institution in several countries, including Britain and the United States, and because members of Abu Dhabi's ruling family were major shareholders in the bank.

Oil and Natural Gas

Abu Dhabi became a member of the Organization of the Petroleum Exporting Countries (OPEC) in 1966. When the amirates federated in 1971, membership was transferred to the UAE. Although Abu Dhabi officials represented the other amirs, the officials exercised no power over the amirs because each maintained control of his amirate's underground wealth. Each ruler oversaw arrangements for concessions, exploration, and oil field development in his own territory and published limited information about such arrangements. Thus, the federal Ministry of Petroleum and Mineral Resources has limited power to set policy and engage in overall planning. In 1988 a presidential decree abolished the Department of Petroleum and dissolved the board of directors of the Abu Dhabi National Oil Company (ADNOC). The functions of these bodies (administration and supervision of the country's petroleum affairs) were taken over by the newly formed Supreme Petroleum Council, whose eleven members were led by Shaykh Khalifa ibn Zayid Al Nuhayyan.

Discoveries in the 1980s and 1990s greatly increased the UAE's oil and gas reserves. By 1992 the four oil-producing amirates had total estimated proven crude oil reserves of 98 billion barrels and natural gas reserves of 5.2 trillion cubic meters, with the majority of both reserves lying within Abu Dhabi.

Based on the relative size of their reserves and on their long-term development plans, Abu Dhabi and the other oil-producing amirates have pursued differing policies. Abu Dhabi, with massive reserves, has on the whole based its production and economic development plans on long-term benefits, occasionally sacrificing production and price to meet this end. The other amirates, less well endowed with oil and gas, have sought to exploit their meager resources to produce short-term gains.

In the early 1980s, Abu Dhabi adhered to OPEC production ceilings while Dubayy routinely exceeded them. After 1987, however, both Abu Dhabi and Dubayy habitually produced above OPEC levels. In early 1987, for example, when Abu Dhabi's OPEC quota was set at 682,000 barrels per day (bpd—see Glossary) and Dubayy's at 220,000 bpd, Abu Dhabi produced 1,058,000 bpd (64 percent above quota) and Dubayy produced 365,000 bpd (60 percent above quota) (see table 27, Appendix). As a result, OPEC established a committee to promote greater adherence to quotas by chronic overproducers such as the UAE. For its part, the federation argued that its quotas were too small in relation to its large reserves and to the quotas of other producers.

The UAE's quota was raised several times by OPEC, and it was at almost 1.1 million bpd in March 1990. Not recognizing the OPEC figure, UAE production at the time was 2.1 million bpd. By July 1990, oil prices had fallen to US$14 per barrel, and the UAE agreed to a compromise proposal that raised its OPEC quota to 1.5 million bpd. Meanwhile, among Iraq's public accusations was that both Kuwait and the UAE had deprived

Iraq of much-needed revenues by driving down world oil prices through production above their OPEC quotas.

After Iraq invaded Kuwait in August 1990, OPEC suspended quotas to allow member states to compensate for the lost production of Kuwait and Iraq. Producing an average of 2.1 million bpd, the UAE earned US$15 billion in oil revenues in 1990. In the following year, producing an average of about 2.4 million bpd, the federation earned US$14 billion. In March 1992, OPEC raised the UAE's quota to slightly more than 2.2 million bpd, which the UAE appeared to be observing. In March 1991, the UAE announced that it would expand its oil production capacity to 4 million bpd by the mid-1990s as part of a multibillion dollar development program.

Abu Dhabi

Abu Dhabi granted its first oil concession, covering its entire territory, in 1939 to the Trucial Coast Development Oil Company (renamed the Abu Dhabi Petroleum Company, or ADPC, in 1962). The company discovered oil in 1960; production and export commenced in 1962 offshore and in 1963 onshore. ADNOC acquired 60 percent of ADPC in the early 1970s. In 1978 ADPC was reconstituted as the Abu Dhabi Company for Onshore Oil Operations (Adco). In the late 1980s, the remainder of Adco's shares were divided: British Petroleum (BP), Royal Dutch Shell Oil, and Compagnie Française des Pétroles (CFP) received 9.5 percent each; Mobil Oil and Exxon, 4.75 percent each; and Participations and Explorations (Partex), 2.0 percent. The principal onshore fields were Bu Hasa, Bab, and Asab. Onshore production totaled 267 million barrels in 1980.

In 1953 the amirate granted a concession to the D'Arcy Exploration Company of Britain to look for oil in offshore and submerged areas not covered in the ADPC concession. Abu Dhabi Marine Areas (ADMA), a multinational consortium, took over this concession in 1955. The company made its first commercial strike in 1958, and production and export started in 1962. In 1977 ADMA and ADNOC agreed to form the Abu Dhabi Marine Areas Operating Company (ADMA-Opco) for offshore work. In the late 1980s, ADNOC owned 60 percent of ADMA-Opco; Japan Oil Development Company, 12.0 percent; BP, 14.7 percent; and CFP, 13.3 percent. Offshore fields included Umm ash Shayf, Az Zuqum, Sath ar Ras Boot, Dalma, and Umm ad Dalkh. The island of Das, northeast of the island of Dalma, became the center for offshore operations.

Unlike most gulf countries, as of the end of 1992 Abu Dhabi had not claimed 100 percent ownership of its oil industry. ADNOC was established in 1971 and, in addition to holding majority shares in Adco and ADMA-Opco, was involved in producing, refining, distributing, and shipping gas. ADNOC owned 51 percent of the Abu Dhabi Gas Liquefaction Company, whose Das facility has sent most of its liquefied natural gas (LNG) and liquefied petroleum gas (LPG) to Japan since 1977. In 1988 the Das facility produced nearly 2.5 million tons of LNG from offshore fields. ADNOC also holds 68 percent of Abu Dhabi Gas Industries, which extracts propane, butane, and condensate at the Ar Ruways plant from associated gas produced by the onshore Bu Hasa, Bab, and Asab fields.

Abu Dhabi's refining, at plants in Umm an Nar and Ar Ruways, is also controlled by ADNOC. Total refining capacity in 1991 was 185,000 bpd, of which 100,000 bpd was available for export. Marketing and distribution are carried out by the Abu Dhabi National Oil Company for Distribution, an ADNOC subsidiary. To buy refineries and gas stations in Europe and Japan, ADNOC and the Abu Dhabi Investment Authority formed a joint venture, the International Petroleum Investment Corporation (IPIC). In 1989 IPIC held a 20 percent share in a Madrid-based refining company.

The amirate's exports are pumped through terminals at Jabal az Zannah and on the island of Das. There is a smaller terminal at Al Mubarraz.

Dubayy

The Iraq Petroleum Company (IPC) held a concession for Dubayy from 1937 to 1961. CFP and Compañía Española de Petróleos (Spanish Petroleum Company—Hispanoil) obtained an onshore concession in 1954 and formed Dubai Marine Areas (Duma). Continental Oil Company acquired the IPC concession in 1963 and formed the Dubai Petroleum Company (DPC). That same year, DPC acquired 50 percent of Duma and released some of its shares to other companies. Oil was discovered offshore in 1966, and production commenced in late 1969. The Dubayy government acquired a 60 percent share in Duma-DPC in 1975.

Dubayy's oil reserves in 1991 were estimated at 4 billion barrels, which will run out by 2016 if 1990 levels of production continue. Dubayy's production policy has been to ignore OPEC quotas for the most part, concentrating on exploiting the amirate's fields as efficiently as possible. This has meant producing at or near capacity most of the time. The principal fields are Fath, Rashid, and Falah offshore, and Margham onshore. The amirate has two refineries, with a third planned for the mid-1990s.

The Dubayy government established the Dubai Natural Gas Company (Dugas) in 1975 to process gas from offshore oil fields. By the early 1990s, the company also planned to process associated gas from the onshore Margham field. Dugas's foreign partner was Scimitar Oils (Dubai), a subsidiary of Canada's Sunningdale Oils. The Dugas processing facilities at Mina Jabal Ali came on-line in 1980 with a capacity of 20,000 bpd of natural gas liquids (propane, butane, and heavier liquids) and 2.1 million cubic meters of dry gas (methane) a day. The dry gas is piped to the Dubai Aluminum Company (Dubal), where it fuels a large electric power and desalination plant. A small part of the natural gas liquids is locally bottled and consumed, but most is exported to Japan. A special gas terminal at Mina Jabal Ali that can handle tankers of up to 48,000 tons opened in 1980. The amirate's gas reserves are estimated at 125 billion cubic meters.

Sharjah

In 1969 the amir of Sharjah granted a forty-year concession for offshore exploration and production to a consortium of small United States oil companies known as Crescent Oil Company. Oil was discovered in 1973 in the Mubarak field off the island of Abu Musa, and production began in 1974. Because of conflicting territorial claims, Sharjah has production and drilling rights but shares production and revenue with Iran (50 percent), Umm al Qaywayn (20 percent), and Ajman (10 percent). By 1984, Iran reportedly ceased transferring to Sharjah its half-share of oil revenues, presumably because of the financial drain of the war with Iraq, as well as Arab support of Iraq. In 1988 Iran attacked the facilities at Mubarak, causing their closure for two months.

In 1980 the American Oil Company (Amoco—later Amoco Sharjah) announced a major discovery onshore of oil and gas in the Saghyah field. By late 1983, output reached 35,000 bpd of condensate, which was exported. In 1984 total production reached 62,000 bpd. In the same year, the Emirates General

Petroleum Corporation completed a 224-kilometer pipeline to supply dry gas to power plants in the northern amirates. The pipeline had a capacity of 60,000 bpd of condensate and 1.1 million cubic meters per day of gas. After Dubayy and Sharjah settled their border dispute in 1985, a pipeline was built to supply gas from the Saghyah field to the power and desalination plant of the Dubai Electrical Company at Mina Jabal Ali. An LPG processing plant that came on-line in 1986 was producing 11.3 million cubic meters of wet gas per day in 1987. The amirate's outlook was optimistic in 1992, with Amoco Sharjah announcing a new onshore gas and condensate field and increased reserves at existing fields.

Other Amirates

Ras al Khaymah has limited oil and gas reserves, which were initially exploited in the early 1980s. By 1986 production was about 10,000 bpd, with most of the revenues plowed back into exploration and development. In that year, the amirate had completed pipelines from its offshore As Sila field to the mainland and had established separation and stabilization facilities, storage facilities capable of holding 500,000 barrels, and a 1,000-bpd LPG plant. By 1991 production had plummeted to 800 bpd.

Exploration and drilling in Ajman, Umm al Qaywayn, and Al Fujayrah have not yielded significant finds. Some of this activity has been funded by the federal government.

Industry

Non-oil industries have had a checkered history. On the positive side, federal and local governments have initiated many industrial projects that have aided in the development of the UAE. Local and foreign private capital found numerous opportunities in the friendly business climate of the amirates, with the result that by 1987 manufacturing contributed 9 percent to GDP (see table 28, Appendix). However, because of the lack of a unified planning mechanism and outright competition among amirates, redundancy has been a recurring problem. For example, there are nine cement factories in the UAE with a total capacity of 8.5 million tons per year. Local demand was estimated in 1986 at only 2 million tons. In addition, out of five steel rolling mills, three have had to close. Plastics and certain foods are overproduced. A 1988 study by the Ministry of Economy and Industry reported that local industry suffered

Downtown Dubayy, capital of the amirate of Dubayy
Courtesy Embassy of the United Arab Emirates, Washington

from low wage levels, a lack of new technology, and a low level of value added in many industries. In 1983 the Emirates Industrial Bank was established; one of its roles is to assist ailing industries financially.

Dubayy, with its long history of entrepôt trading, has the most developed non-oil industrial sector. Abu Dhabi, however, has focused on using its oil resources in downstream (see Glossary) facilities. Some of the northern amirates are developing their mineral resources. By 1990 total manufacturing output had a value of about US$2.6 billion, with 80 percent of the UAE's factories located in Abu Dhabi, Dubayy, and Sharjah.

Dubayy

The first major factory in the amirate was the aluminum smelter opened by Dubal at Mina Jabal Ali in 1979. It had a capacity of 135,000 tons of aluminum ingots per year, which was reached in 1982. In 1991, after expansion, it produced 290,030 tons of aluminum ingots. The five gas turbines that generate power for the plant are fueled by Dugas's neighboring gas treatment plant. A desalination plant associated with the turbines supplies 40 percent of Dubayy's drinking water requirements.

Dubayy became a strong magnet for industries, large and small, with the opening in 1985 of the Mina Jabal Ali Free Zone. Starting with about forty companies in the first year, the zone hosted 382 firms by 1992, including multinational giants Mitsubishi, Minnesota Mining and Manufacturing, Union Carbide, and Xerox, and scores of small Indian firms, many producing textiles. Local firms include National Flour Mills and the National Cement Company. Among the inducements to firms are a large pool of cheap labor, no taxes, no import or export duties, the right to 100 percent foreign ownership, and the right to repatriate profits and capital.

Another major facility in the free zone is the Dubai Dry Docks, owned by the Dubayy government. One of the largest and most modern in the world, the facility has three dry docks that can handle vessels up to 1 million deadweight tons. The dry docks have well-equipped workshops for plate and pipe, machinery, rigging, and electric repair, as well as a sophisticated laboratory. Completed in 1979, the docks lay idle, incurring substantial maintenance costs, until 1983 when a contract for an operator was signed. The delay was attributed in part to indecision and the amir's poor health.

By 1985, however, 111 ships with a total capacity of 10 million deadweight tons had been repaired. In 1988 the dock was fully occupied by vessels damaged in the Iran-Iraq War.

Abu Dhabi

The principal industrial facilities are located at Ar Ruways, 224 kilometers from the capital. The Ruways Fertilizer Industries plant came on-line in 1983 and uses natural gas as fuel and feedstock. ADNOC owns two-thirds of the plant, and Total-CFP owns the remainder. The plant was built with a capacity to produce 100 tons per day of ammonia and 1,500 tons per day of urea. Its customers have been mainly India and China. Sulfur extracted through oil and gas processing is exported from a special bulk terminal. A smaller industrial area exists at Al Musallah, just outside the city of Abu Dhabi.

The Northern Amirates

According to a 1987 study, Sharjah was the site of 35 percent of the UAE's industrial installations. The amirate has an industrial zone with factories producing a variety of items, including furniture and household utensils. A fodder factory at Mina Khalid run by the Gulf Company for Agricultural Development opened in 1982. Other plants in the amirate include a cement factory, a plastic pipe factory, and a rope factory.

The gulf's first explosives factory opened in Ras al Khaymah in 1980. A pharmaceutical plant opened the following year. The amirate has several factories that use local stone and minerals. In addition to three cement factories, there is an asphalt company, a lime kiln, and a thriving export business by the Ras al Khaymah Rock Company in aggregate, the stone used in making concrete.

Al Fujayrah and Ras al Khaymah have capitalized on resources from the Al Hajar al Gharbi Mountains, building plants that produce aggregate, marble, tile, asbestos insulation, and concrete blocks. Although lack of local energy sources has hindered industrial development, Al Fujayrah's development plans for the 1990s include provision for investment by other GCC states.

Umm al Qaywayn has relied on cement and related industries as a source of revenue but has suffered because of overproduction in the UAE. In 1987 it established a free zone modeled on that of Dubayy. Among Ajman's facilities are a dry dock, a ship repair yard, and a cement factory.

Electricity and Water

The demands of a rapidly growing population and a developing industrial base have necessitated a concomitantly speedy expansion of the capacity to provide electrical power and potable water. As in other areas, Abu Dhabi and Dubayy have had the funds to provide public utilities at a faster pace than the northern amirates. When the UAE was formed and the Ministry of Electricity and Water created, Abu Dhabi, Dubayy, Sharjah, and Ras al Khaymah had their own electric companies. The creation of the federation has seen some progress in unifying the national electrical grid and assisting the smaller amirates with power and water supply.

Abu Dhabi's generating capacity expanded from eight megawatts in 1973 to 845 megawatts in 1982. One study found that between 1973 and 1982, Abu Dhabi's demand for electricity expanded by 25 percent per year, while Dubayy's grew by 15 percent per year. The other amirates were not as well supplied with electricity and needed additional generating capacity. Sharjah and Ras al Khaymah suffered power disruptions in 1983 because of overloaded facilities. By 1988 installed generating capacity for the entire UAE had risen to 3,850 megawatts, up from 1,724 megawatts in 1979.

Unable to meet demand from natural sources of freshwater, the UAE has had to use desalination plants, many of which run in tandem with power stations. In 1985 there were twenty-two desalination plants in the amirates. Water production in 1989 amounted to about 327 billion liters, up from about 312 billion liters in 1987.

Labor

There was no significant foreign labor force before the sharp rise in oil revenues in the 1970s. Most work was done by local Arabs, some by slaves brought from Africa; Indians and Iranians were mainly merchants. The slave trade, most of which ended by about 1945, was a major point of contention in relations between Britain and the rulers of the Trucial Coast. For example, if the British resident was opposed by a shaykh on a specific matter, the resident in some cases might accuse the shaykh of violating treaty bans on the slave trade and threaten to destroy his pearling fleet or invalidate the travel documents of the shaykh and his subjects.

The massive influx of foreign workers and professionals in the 1970s and 1980s, mainly from other Arab countries and from India, Pakistan, and Iran, fundamentally changed the face of UAE society. (The UAE's population increased 86 percent between 1975 and 1980.) Working conditions of foreign workers in the UAE vary. Professionals, managers, and clerical workers are attracted by contracts offering good salaries, comprehensive benefits, and high living standards. Unskilled and semiskilled workers are in a more precarious situation. In their home countries, they might be cheated or misled by unscrupulous labor contractors who supply workers to the gulf countries. Although many obtain safe work at reasonable wages (much of which they remit to their families abroad), others work long hours in conditions not regulated for safety and health as stringently as they should be. In the 1980s, however, the government attempted to improve the labor law, which covered conditions of employment, compensation, inspection of the workplace, and enforcement procedures. Job security can be capricious, often depending on the whims of the oil market and the national mood. In the early 1980s, for example, during a period of economic decline, authorities increased their efforts to discover foreign workers without proper credentials and deported them as illegal aliens. By 1986, however, Dubayy tried to reverse the outward flow of labor by encouraging immigrant workers to bring their families with them.

In addition, labor is not permitted to organize, strike, or engage in collective bargaining. Individuals or groups of workers may bring grievances to the Ministry of Labor and Social Affairs, which has been known to settle matters with fairness. Although the law prohibits the employment of youths under eighteen and restricts hours of work to eight hours per day six days per week, the law is widely violated. There is no minimum wage.

In 1986, according to one set of government figures, the size of the labor force was 890,941. About 25 percent worked in construction, 14 percent in trade, 7 percent in transportation and communications, and 6 percent in manufacturing. According to the Ministry of Labor and Social Affairs, in 1992 UAE citizens accounted for 7 percent of the total work force and about 1 percent of the private-sector work force.

Transportation

Oil revenues have helped finance a modern transportation infrastructure consisting of roads, ports, and airports. These facilities have helped make the UAE, and Dubayy in particular, a major hub of regional and international air and sea traffic. The UAE has about 2,000 kilometers of roads, of which 1,800 kilometers were paved as of 1993. The principal road is a highway via the main coastal cities, from Ash Sham to the northwestern border of the UAE, where it connects with roads to Saudi Arabia and Qatar.

Dubayy's port at Mina Jabal Ali, with sixty-seven berths in 1988, is one of the largest man-made harbors in the world. Located fifty-three kilometers southwest of the city of Dubayy, it handled nearly 10 million tons of cargo in 1989. Mina Rashid, also in Dubayy, in 1984 had thirty-five berths. The Dubayy Ports Authority was established in 1991 to operate the two ports. In addition to Mina Jabal Ali and Mina Rashid in Dubayy, the UAE's other ports are Mina Zayid in Abu Dhabi, Mina Khalid in Sharjah, Mina Saqr in Ras al Khaymah, Khawr Fakkan, and Mina al Fujayrah, the port at Al Fujayrah.

During periods of regional conflict, such as the Iran-Iraq War of 1980–88 and the Persian Gulf War of 1991, high insurance premiums for gulf shipping periodically reduce the amount of traffic handled at the UAE's ports, although Mina al Fujayrah and Khawr Fakkan have the advantage of lying outside the Persian Gulf on the Gulf of Oman. Abu Dhabi National Tankers Company operates about fifty ships, another aspect of UAE port traffic.

The international airport in Dubayy is the region's busiest, serving 4.3 million passengers in 1988 and handling 144,282 tons of cargo in 1990. Other international airports, which have had difficulty attracting traffic, operate in Sharjah, Ras al Khaymah, and Al Fujayrah. The New Abu Dhabi International Airport opened in 1982, and the Al Ayn International Airport was scheduled to open in the early 1990s. Emirates Airlines is the UAE's international airline.

Telecommunications

The UAE has a modern telecommunications network that provides its citizens with good telephone and broadcast services. In 1992 the country had 386,000 telephones, or about eighteen telephones per 100 inhabitants. About one-third of the telephones are in the Dubayy area. Service is entirely automatic. International direct dial is available to all customers. A

Bridge across Dubayy Creek; the United Arab Emirates boasts many modern highways.
Courtesy Embassy of the United Arab Emirates, Washington

domestic network of high-capacity radio-relay stations and coaxial cable links all major towns.

International telecommunications are excellent. Radio-relay and undersea cables link the UAE with neighboring countries, and two satellite systems provide links to the rest of the world. Telecommunications to Saudi Arabia and to Bahrain go via high-capacity radio-relay links. Submarine cables laid in the late 1980s carry telephone calls to Qatar, Bahrain, India, and Pakistan. Telephone, television, and data communication to Europe, Asia, and the Americas go via three satellite groundstations, working with the International Telecommunications Satellite Corporation's (Intelsat) Atlantic Ocean and Indian Ocean satellites. In the early 1990s, television viewers in the UAE and throughout the Persian Gulf began receiving the twenty-four-hour news broadcasts of the Atlanta-based Cable News Network (CNN) via Intelsat. Television transmission and telephone calls to other countries in the Middle East are routed through a ground station linked to the Arab Satellite Communication Organization (Arabsat) satellite. Arabsat provides telephone, data transmission, telex, and facsimile service. Arabsat also is used for live broadcasts of prayers from Mecca and Medina and for viewing inter-Arab sports events.

In early 1993, broadcast facilities were adequate, and all populated areas of the country received television transmissions and radio broadcasts. Eight AM radio stations broadcast in Arabic, English, Urdu, and Sinhalese, in addition to three FM radio stations. Two powerful shortwave stations with broadcasts in Arabic and English can be received worldwide. Television broadcasts reach throughout the country via twelve large transmitters. The country has an estimated 400,000 radios and 170,000 television sets.

Agriculture and Forestry

Agriculture, including fishing, was a minor part of the UAE economy in the early 1990s, contributing less than 2 percent of GDP. Since the formation of the UAE, the availability of capital and the demand for fresh produce have encouraged agricultural development. The main farming areas are Diqdaqah in Ras al Khaymah, Falaj al Mualla in Umm al Qaywayn, Wadi adh Dhayd in Sharjah, Al Awir in Dubayy, and the coastal area of Al Fujayrah. Total cultivable land is around 70,000 hectares.

Most of the UAE's cultivated land is taken up by date palms, which in the early 1990s numbered about 4 million. They are cultivated in the arc of small oases that constitute the Al Liwa Oasis. Both federal and amirate governments provide incentives to farmers. For example, the government offers a 50 percent subsidy on fertilizers, seeds, and pesticides. It also provides loans for machinery and technical assistance. The amirates have forty-one agricultural extension units as well as several experimental farms and agricultural research stations. The number of farmers rose from about 4,000 in the early 1970s to 18,265 in 1988.

Lack of arable land, intense heat, periodic locust swarms, and limited water supplies are the main obstacles to agriculture. The drive to increase the area under cultivation has resulted in the rapid depletion of underground aquifers, resulting in precipitous drops in water tables and serious increases in soil and water salinity in some areas. As a result, several farms have been forced to cease production. Despite the creation in 1983 of a federal authority to control drilling for water, development pressures in the 1980s and 1990s increased the exploitation of underground water supplies.

Between 1979 and 1985, agricultural production increased sixfold. Nevertheless, the UAE imported about 70 percent of its food requirements in the early 1990s. The major vegetable crops, supplying nearly all the country's needs during the season, are tomatoes, cabbage, eggplant, squash, and cauliflower. Ras al Khaymah produces most of the country's vegetables. In addition to dates, the major fruit crops are citrus and mangoes. A vegetable canning facility in Al Ayn has a processing capacity of 120 tons per day.

Poultry farms provided 70 percent of local requirements for eggs and 45 percent of poultry meat needed in 1989. Local dairies produced more than 73,000 tons of milk in 1991, meeting 92 percent of domestic demand.

Considerable revenues have been devoted to forestation, public landscaping, and parks. Trees and shrubs are distributed free to schools, government offices, and residents. Afforestation companies receive contracts to plant plots in the range of 200 to 300 hectares. The goals are to improve the appearance of public places as well as to prevent the desertification process in vulnerable agricultural areas.

Fishing

The government has supported traditional fishing in the rich waters off the UAE, an activity that has provided livelihood for centuries along the coast. The government offers a 50 percent subsidy on fishing boats and equipment and has opened marine workshops that offer free repair and maintenance. Cooperatives assist fishermen in marketing their catch. The number of fishermen rose from 4,000 in 1980 to 10,611 in 1990. The total catch in 1989 of 91,160 tons (up from 70,075 tons in 1982) supplied most local demand. Moreover, prawns and fish are raised in fish farms at the National Mariculture Center—operated with Japanese assistance—in Umm al Qaywayn.

Banking and Finance

The Indian rupee was the principal medium of exchange in the amirates until 1966, when Abu Dhabi began using the Bahraini dinar and Dubayy and the northern amirates switched to the Qatar-Dubayy riyal. The federal Currency Board was established in 1973 to manage the new national currency (the UAE dirham, divided into 100 fils). The UAE dirham was officially linked in 1978 to the special drawing rights (SDR—see Glossary) of the International Monetary Fund (IMF—see Glossary); in practice, however, the UAE dirham was pegged to the United States dollar. The rate of Dh3.67 to US$1 has held constant since the end of 1980.

Reluctant to transfer financial accountability over local banks (including ones in which they had major interests) to outsiders, the ruling amirs refused to give the Currency Board, managed mainly by foreigners, any control over banking. In the midst of an oil boom, banks proliferated, credit expanded, and real estate speculation was rampant, creating a chaotic financial environment. In 1975 a moratorium on the opening of new banks was imposed, temporarily lifted, then reimposed. The board's lack of foreign exchange meant it could not support the UAE dirham in 1977 when a massive run on the currency led to a financial crisis and the collapse of two banks. In late 1980, a law converting the Currency Board into a central bank took effect. Although the Central Bank had more authority than the Currency Board, it encountered opposition from various members of amirate ruling families when it attempted to put new policies and regulations in place.

The Central Bank's responsibilities include issuing currency, maintaining gold and foreign currency reserves, regulating banks, and controlling credit to encourage balanced economic growth. It also advises the government on monetary and finan-

Fisherman and his wares;
Persian Gulf waters provide
abundant fish.
Courtesy Embassy of the United
Arab Emirates, Washington

cial policy. In 1981 the moratorium on new banks was lifted once again. But in an effort to rein in the proliferation of banks, the Central Bank announced the same year that foreign banks would receive no new branch licenses and that foreign banks already operating in the country would be restricted to eight branches each by 1984.

The Central Bank took several measures in the early 1980s to strengthen the banking structure. It expanded audits and inspections, increased bank reporting requirements, established a computerized loan risk department, and set minimum capital requirements. The Central Bank also created a regulation that limited the size of a bank's loans to its directors. As a result of a violation of this regulation, administrators appointed by the Central Bank in 1983 took over the UAE's third largest bank, the Union Bank of the Middle East. The Central Bank and the Dubayy government bailed out the bank in the amount of US$380 million. Another bank, the Emirates Industrial Bank, was established in 1983 with capital of Dh500 million as a source of loans for new industries.

As a result of uncertainty in the wake of Iraq's August 1990 invasion of Kuwait, between 15 and 30 percent of customer bank deposits were transferred out of the UAE. At least two banks required injections of funds from the Central Bank to maintain liquidity, but confidence and deposits gradually returned. The Central Bank's governor was replaced in 1991 in the wake of the failure of the National Investments and Security Corporation.

Another crisis rocked the UAE banking sector in 1991 when the Luxembourg-registered Bank of Credit and Commerce International (BCCI) was shut down in most of the sixty-nine countries in which it operated. BCCI's troubles began in 1988 when two of its United States subsidiaries were accused of laundering profits from the illegal drug trade. Abu Dhabi's ruler and UAE president, Shaykh Zayid ibn Sultan Al Nuhayyan, is a founding shareholder in BCCI and in 1990 had purchased, along with others in Abu Dhabi, a 77 percent share in the bank. Having moved the bank's headquarters from London to Abu Dhabi, Shaykh Zayid ibn Sultan was in the process of restructuring the troubled bank when an audit commissioned by the Bank of England alleged major and systematic fraud by BCCI. That audit triggered the closing of most of BCCI's banks worldwide.

The ripples of the crisis spread throughout the UAE business community. In addition to its massive obligations worldwide, BCCI owed agencies in Abu Dhabi US$1.4 billion and private investors US$600 million. In October 1992, a Luxembourg court approved a US$1.7 billion compensation agreement between the bank's liquidators and the majority shareholders. The agreement called for the shareholders to pay 30 to 40 cents on the dollar to BCCI depositors.

Budget

The provisional constitution stipulates that each amirate contribute to the federal budget. In practice, however, Abu Dhabi was the only contributor in the 1970s; Dubayy began to contribute in the early 1980s. In 1991 Abu Dhabi provided 77.5 percent of the federal budget and Dubayy, 8.5 percent. The government levies taxes on oil companies and banks in Abu Dhabi and Dubayy but not on other businesses and individuals.

The poorer amirates benefit from federal expenditures on defense, infrastructure, education, and social services, but they draw up their own budgets (which are seldom published) for municipal expenditures and industrial projects. Some of these projects have been motivated more by prestige than practicality. For example, Dubayy, Sharjah, and Ras al Khaymah have built large international airports, even though they are a one-half-hour drive from each other and less than a two-hour drive from Abu Dhabi's large international airport.

Ras al Khaymah and Sharjah have borrowed heavily to finance facilities and industries, resulting occasionally in economic and political problems. Sharjah, for example, suffered a coup attempt in 1987 carried out by opponents critical of the amir's alleged financial mismanagement. The amirate's debt burden at the time was estimated at US$920 million.

The revenue and spending estimates for the UAE's first and only five-year plan (1981–85) were based on strong oil revenues in the late 1970s. Petroleum revenues fell in the early 1980s, however, rendering many of the plan's goals unattainable. The federation's first budget deficit (Dh3.9 billion) occurred in 1982. Since that time, government planners have opted for a more flexible approach, keeping in mind the vagaries of the world oil market and tending to be more conservative in revenue and spending projections. Even so, sudden drops in oil revenues have repeatedly forced the government to put new projects on hold and to freeze current projects. Deficits generally are funded by Abu Dhabi and Dubayy and by borrowing from the Central Bank.

Although there is no attempt at long-term, coordinated development planning, three main objectives have guided federal government spending. These include strengthening the federation's physical infrastructure and social services network, diversifying the economy, and expanding entrepôt trade.

Despite slowdowns in world oil markets and amirs jealous of their local sovereignty, the UAE has been able to finance massive infrastructure projects (roads, utilities, communications, ports, and airports); modern education, health, and welfare systems; and improvements in agriculture and fishing. The lion's share of the federal budget, however, goes to defense (see table 29, Appendix). As a result of the continuing potential for conflict in the gulf in the 1990s, defense will probably continue to absorb between 40 and 50 percent of federal outlays and will not face the same cuts as do other sectors if the economy contracts.

After battling budget deficits during most of the 1980s, the UAE saw budget surpluses in 1990 and 1991. Deficits were projected to return in 1992 and 1993, with an almost US$710 million shortfall expected in 1993 (the figure includes US$245 million rolled over from the previous year's deficit).

Abu Dhabi is one of the world's most generous donors of foreign aid in terms of GDP and population. In 1981 foreign grants and loans amounted to US$2.7 billion, or 8 percent of GDP. Even in leaner times, aid in 1983 was US$1 billion, or 4 percent of GDP. The Abu Dhabi Fund for Arab Economic Development, with paid-up capital of US$500 million, extends loans and grants mainly to Arab and Muslim countries. Recipients have included Bangladesh, Egypt, Jordan, Mauritania, Morocco, Syria, and Yemen. The level of annual outlays depends on oil revenues. In 1989 the fund's committed capital was US$2.2 billion. Loans in 1988 amounted to US$41.1 million, up from US$4.2 million in 1987.

Trade

The UAE, in particular Dubayy, epitomizes trade. The federal government promotes open and free trade as an official policy, and a thriving source of income and full employment has resulted. The oil economy (world prices and demand as well as local production) and regional security strongly influence trade. Oil and gas exports account for about three-fourths of all exports. The UAE's balance of trade surplus grew during the boom years of the 1970s but leveled off in the 1980s with decreased oil production. Although the Iran-Iraq War buffeted the oil economies of the region, Dubayy's fruitful trade links with Iran helped it to have exports and reexports of US$354 million in 1987.

The end of the Iran-Iraq War in 1988 led to a 20 percent increase in UAE imports, reducing the trade surplus from its 1987 level of US$5.2 billion (Dh19 billion) to US$3.7 billion (Dh13.4 billion) (see table 30, Appendix). But oil price increases and production increases resulting from Iraq's invasion of Kuwait in 1990 created a windfall for the UAE and drove the federation's trade surplus to US$9.3 billion (Dh34.1 billion).

Administering customs and setting rates are functions reserved to the individual amirates, and duties and regulations therefore vary among them. In 1982 Dubayy and Sharjah reduced their customs duties from 3 percent to 1 percent, bringing them on a par with Abu Dhabi's tariffs. In 1983 a 4 percent general import tariff was imposed to conform to agreements among GCC members on minimum duties.

Principal imports are manufactured goods, machinery, transportation equipment, food, and live animals. Leading suppliers in 1988 were Japan, Britain, and the United States. Nonpetroleum exports include basic manufactures, aluminum, and cement. The reexport trade overshadows national exports. Federal exports, which consist largely of petroleum, go mainly to Japan (see table 31, Appendix). In 1988 national exports amounted to US$518 million while reexports stood at more than US$2 million. Iran, Qatar, and Saudi Arabia are the principal recipients of reexports. The view along bustling Dubayy Creek gives ample evidence of the vibrant reexport trade. Scores of large, motorized dhows tied up four and five deep line the wharf, their decks and holds packed with refrigerators, television sets, clothing, toys, and even automobiles. In 1991 Dubayy's imports (much of which was destined for reexport) arrived from Japan, the United States, China, Britain, and the Republic of Korea (South Korea).

Government and Politics

Executive and Legislative Branches

On July 18, 1971, rulers of six amirates from those known as the Trucial Coast states, ratified the provisional constitution of the UAE. A product of more than three years of discussion and debate among the rulers, the document was promulgated on December 2, 1971, on the UAE's independence. (Ras al Khaymah joined the union in February 1972.) Originally, the provisional constitution was to be replaced after five years with a permanent document, pending the resolution of issues standing in the way of full integration among the federation's amirates. These issues included individual amirates' contributions to the federal budget and defense integration. Reflecting a lack of progress in resolving these matters and a grudging preference for the status quo, however, the provisional constitution was extended for five-year periods in 1976, 1981, 1986, and 1991.

The provisional constitution of the UAE provides for the separation of powers into executive, legislative, and judicial branches. Additionally, it separates legislative and executive powers into federal and amirate jurisdictions. Certain powers are expressly reserved for the central government, including foreign policy, defense, security, immigration, and communications. The individual amirates exercise residual powers.

The separation of powers remained nominal in 1993. The Supreme Council of the Union (SCU), also seen as the Federal

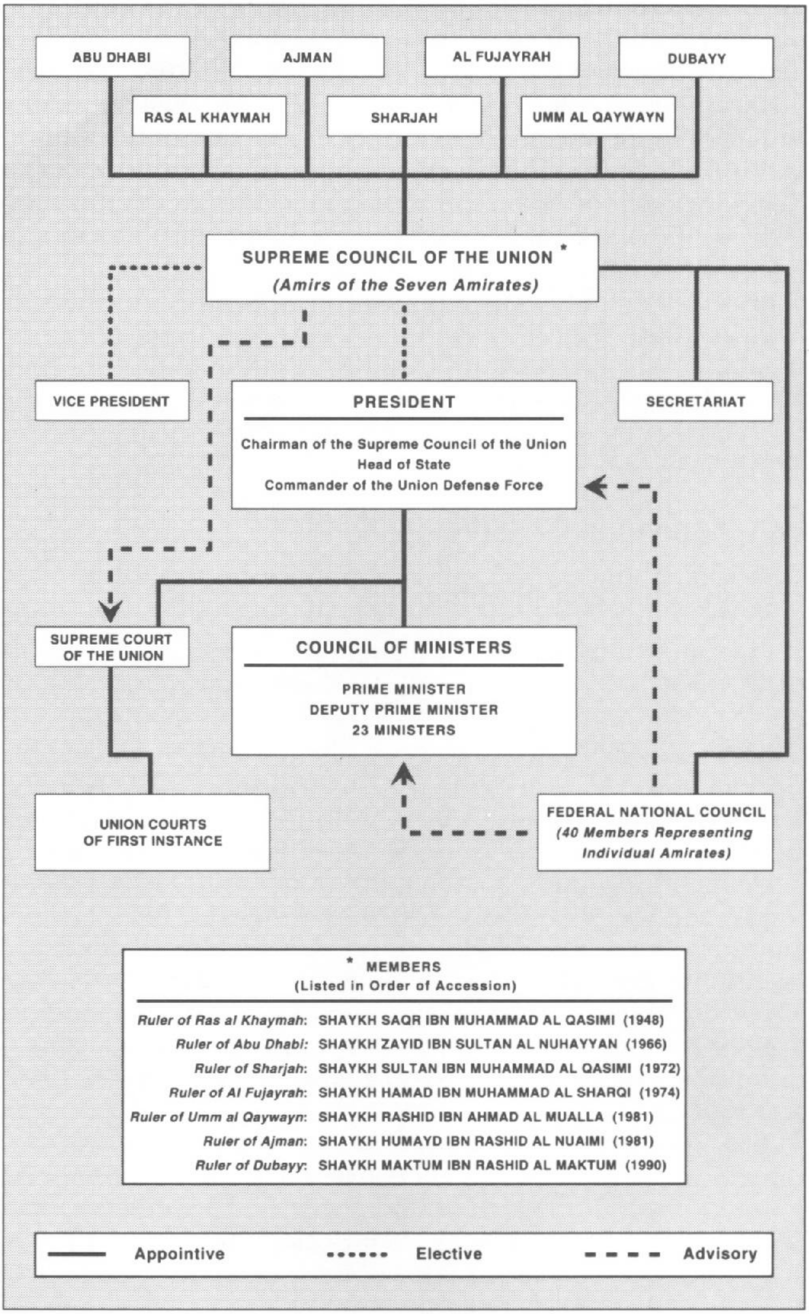


Figure 12. United Arab Emirates: Government Structure, 1992

Supreme Council, functions as the highest federal authority in executive and legislative capacities. Narrowly, the executive branch consists of the SCU, the Council of Ministers (the cabinet), and the presidency (see fig. 12). The SCU consists of the rulers of the seven amirates; it elects from among its members a chairman and a vice chairman, who serve for a term of five years. Article 150 of the provisional constitution defines the powers of the SCU as formulation of general policy; legislation on all matters of state; ratification of federal laws and decrees, including those relating to the annual budget and fiscal matters; ratification of international treaties and agreements; and assent to the appointment of the prime minister and Supreme Court of the Union judges.

The rulers make decisions by a simple majority vote, except on substantive issues. Substantive issues require a two-thirds majority (five of seven rulers), including the votes of both Abu Dhabi and Dubayy. The SCU carries out its work through a secretariat and whatever ad hoc committees it chooses to appoint.

The president serves as chairman of the SCU, head of state, and commander of the Union Defense Force. The president convenes the SCU and appoints the prime minister, deputy prime minister, cabinet ministers, and other senior civil and military officials. He has the power to proclaim martial law and to carry out a variety of functions usually associated with the chief executive.

The Council of Ministers administers federal affairs. In 1992 there were twenty-five ministers, including the prime minister and deputy prime minister. UAE citizenship is a requirement for appointment as a minister. All ministers are individually and collectively answerable to the president and the SCU. In addition to its executive duties, the Council of Ministers is responsible for drafting bills for formal enactment.

Under the provisional constitution, the Federal National Council (FNC) is the principal legislative authority, but its actual role in the governmental process is limited to consultation. Its forty members are appointed for two-year terms by the respective amirate rulers, in accordance with a constitutionally fixed quota that allots proportionately more members to the wealthiest and most populous amirates. Thus, Abu Dhabi and Dubayy each appoint eight members to the FNC; Ras al Khaymah and Sharjah each appoint six members; and Ajman, Al Fujayrah, and Umm al Qaywayn each appoint four members. Members of the FNC must be citizens of the amirates they represent, twenty-one years of age or older, and literate. They may not hold any other public office.

The FNC meets in regular session for a minimum of six months, beginning in November. The UAE president may call a special session if necessary. The president opens the regular session with a speech on the state of the union. The FNC can reply to the state of the union address in the form of "observations and wishes," but the reply has no legal effect. The FNC also makes recommendations on legislative matters to the Council of Ministers, the president, and the SCU. The FNC can discuss any government bills drafted by the Council of Ministers; it can agree with, amend, or reject such bills, but it cannot veto them.

The laws of the UAE are divided into two main categories: union laws and decrees. A bill drafted by the Council of Ministers for nonbinding deliberation by the FNC and then submitted to the president for his assent and the SCU for ratification becomes a union law when promulgated by the president. Decrees are issued jointly by the president and the Council of Ministers between sessions of the SCU; a decree must be confirmed by the SCU to remain valid.

The Judiciary

Article 94 of the provisional constitution guarantees the independence of the judicial branch under the Supreme Court of the Union. This body consists of a president and up to five judges appointed by the UAE president, following approval by the SCU. The Supreme Court is vested with the power of judicial review and original jurisdiction over federal-amirate and interamirate disputes. It also is empowered to try cases of official misconduct involving cabinet and other senior federal officials.

The provisional constitution also provides for the establishment of union courts of first instance to adjudicate civil, commercial, criminal, and administrative cases. Judgments of these courts can be appealed to the Supreme Court. Local courts in each of the seven amirates have jurisdiction over matters that the provisional constitution does not specifically reserve to the union courts.

The provisional constitution designates the sharia (Islamic law) as the basis of all legislation. Three of the four legal schools of Sunni Islam have adherents in the UAE. Most citizens follow the Maliki legal school, but a minority follow the

Hanbali and Shafii schools. The Twelve Imam Shia (see Glossary) legal school of Shia Muslims also has adherents in the federation (see Sunni Islam; Shia Islam, ch.1).

Ruling Families

In 1993 the most important political figures in the UAE were the senior members of the ruling families of the individual amirates—the Al Nuhayyan family of Abu Dhabi, the Al Nuaimi of Ajman, the Al Sharqi of Al Fujayrah, the Al Maktum of Dubayy, the Al Qasimi of Ras al Khaymah and Sharjah, and the Al Mualla of Umm al Qaywayn. The most powerful amir is Shaykh Zayid ibn Sultan Al Nuhayyan (b. ca. 1920), the ruler of Abu Dhabi and the president of the UAE (reelected to a five-year term in 1991). Shaykh Zayid ibn Sultan has ruled Abu Dhabi since 1966, when his older brother, Shaykh Shakhbut Al Nuhayyan (r. 1928–66), was deposed by the British.

The Al Nuhayyan originally were beduin of the Bani Yas tribe and were based in the Al Liwa Oasis. An ancestor of the current ruler migrated to the island of Abu Dhabi in the late 1770s and established a commercial port there. Prior to 1966, Abu Dhabi remained a small town and residence site of the ruler, but it had not attracted most Al Nuhayyan shaykhs, who preferred to live in the interior oases. Even Shaykh Zayid ibn Sultan favored the beduin lifestyle as a young man, and for several years under his brother's rule he was governor of Al Ayn in the Al Buraymi Oasis. Beginning in the late 1960s, the oil boom-induced transformation of Abu Dhabi into a cosmopolitan city prompted politically ambitious Al Nuhayyan members to settle in the capital, where many of them obtained positions in the expanding amirate and federal bureaucracies.

Shaykh Zayid ibn Sultan designated his son, Shaykh Khalifa ibn Zayid Al Nuhayyan (b. 1949), as crown prince. Khalifa ibn Zayid acquired progressively more responsibilities as he matured. In 1992 he served as president of Abu Dhabi's Executive Council (the amirate equivalent of the Council of Ministers) and as head of the Department of Social Services. In addition, he was deputy commander in chief of the federal Union Defense Force. Shaykh Zayid ibn Sultan had more than forty-five other children, although most of them were not involved actively in politics; one son was a colonel in the Union Defense Force air force. Several of Shaykh Zayid ibn Sultan's cousins were prominent in government, especially the sons of his cousin Muhammad ibn Khalifa Al Nuhayyan: Tahnun ibn

Muhammad Al Nuhayyan was head of ADNOC; Hamdan ibn Muhammad Al Nuhayyan was deputy prime minister; and Sarur ibn Muhammad Al Nuhayyan was chief of the ruler's diwan (court).

Until his death on October 7, 1990, Shaykh Rashid ibn Said Al Maktum (b. 1912), as ruler of Dubayy and vice president and prime minister of the UAE, was the second most powerful amir. His eldest son, Shaykh Maktum ibn Rashid Al Maktum, succeeded him in all his offices. The Al Maktum are a branch of the same Bani Yas tribe that includes the Al Nuhayyan. The Al Maktum emigrated from Abu Dhabi to Dubayy's creek in the 1830s and established there the port that eventually became Dubayy. The late Shaykh Rashid ibn Said succeeded to the rule of Dubayy in 1958 following the death of his father, Shaykh Said ibn Maktum Al Maktum (r. 1912–58). During the 1960s and 1970s, Shaykh Rashid ibn Said presided over the transformation of Dubayy into a wealthy oil amirate. Since the mid-1980s, however, his sons effectively have ruled the amirate because of Rashid ibn Said's serious and chronic illnesses.

Before taking over his father's offices, Shaykh Maktum ibn Rashid (b. 1941) was crown prince and had several other governmental responsibilities. Shaykh Maktum ibn Rashid's brother, Muhammad ibn Rashid Al Maktum, is UAE minister of defense and head of Dubayy's armed forces. Two other brothers also hold important positions in the Dubayy or federal administrations. In addition, several of Shaykh Rashid ibn Said's nephews and cousins are politically prominent.

Two branches of the Al Qasimi tribe rule Sharjah and Ras al Khaymah. The Al Qasimi, based at Ras al Khaymah, emerged as a major maritime power during the eighteenth century; the Al Qasimi control of trade in the Persian Gulf area led to conflict with Oman and eventually with Britain, which was consolidating its colonial empire in India (see Treaties with the British, ch. 1). Following several naval battles, the British finally defeated the Al Qasimi in 1819, burning their ships and the town of Ras al Khaymah. Because of this history, the Al Qasimi inherited a historical hostility toward the British.

The Al Qasimi family of Sharjah is the larger of the two ruling houses. Shaykh Sultan ibn Muhammad Al Qasimi (b. 1942) of Sharjah became ruler in 1972, following the assassination of his brother, Shaykh Khalid ibn Muhammad Al Qasimi (r. 1965–72), killed in an unsuccessful coup to restore his cousin, Shaykh Saqr ibn Sultan Al Qasimi (r. 1951–65), whom the British had

Zayid ibn Sultan Al Nuhayyan, president of the United Arab Emirates and ruler of Abu Dhabi
Courtesy Embassy of the United Arab Emirates, Washington

deposed. Shaykh Sultan ibn Muhammad has a reputation for being relatively progressive and for being an enthusiastic supporter of strengthening the powers of the federal government.

The ruler also has a reputation for initiating extravagant construction projects for the amirate. Since assuming power, Shaykh Sultan ibn Muhammad had amassed a debt estimated in 1987 at US$920 million, creating discontent among some members of the royal family and precipitating a coup attempt in June 1987. While Shaykh Sultan ibn Muhammad was out of the amirate, his elder brother, Shaykh Abd al Aziz Al Qasimi, issued a statement through Sharjah's news agency that Shaykh Sultan ibn Muhammad had abdicated because he had mismanaged the amirate's economy. Despite initial Abu Dhabi support for the pretender, the coup failed when Dubayy called a meeting of the SCU. Through mediation it was decided to return Shaykh Sultan ibn Muhammad to power, but to give Shaykh Abd al Aziz a seat on the SCU and the title of crown prince. Somewhat chastened, Shaykh Sultan ibn Muhammad initiated administrative and financial reforms, but he had the last word when, in February 1990, he removed his brother from the post of crown prince, revoked his brother's right to succeed him, and exiled him.

The Al Qasimi family of Ras al Khaymah is smaller than the branch in Sharjah. Shaykh Saqr ibn Muhammad Al Qasimi (b. 1920) has ruled the amirate since 1948. As do his cousins in Sharjah, he has acquired a reputation for being sympathetic to Arab nationalist issues. He is a contemporary of the former ruler of Sharjah, Shaykh Saqr ibn Sultan, and, like him, tends to be suspicious of the British. In 1971 he refused to accept Britain's compromise for resolving Iran's claims to Tunb al Kubra (Greater Tumb) and Tunb as Sughra (Lesser Tumb), two tiny islands in the Persian Gulf (see Foreign Relations, this ch.). Shaykh Saqr ibn Sultan has designated his son, Khalid ibn Saqr Al Qasimi, as crown prince; Khalid ibn Saqr was educated in the United States.

The rulers of the other three amirates have limited influence within the UAE. Ajman, Al Fujayrah, and Umm al Qaywayn are relatively small, poor, and dependent on their wealthier neighbors for development grants. Shaykh Humayd ibn Rashid Al Nuaimi has ruled Ajman since 1981. Shaykh Rashid ibn Ahmad Al Mualla has ruled Umm al Qaywayn since 1981 as well. In Al Fujayrah, where a majority of the population claims membership in the dominant Al Sharqi tribe, Shaykh Hamad ibn Muhammad Al Sharqi has ruled since 1974.

The Media

Provided the media do not criticize the ruling families and the government, they are relatively free. Abu Dhabi publishes two dailies, one in Arabic, *Al Ittihad* (Unity), and one in English, *Emirates News*, at a government-owned press. The Dubayy government publishes one Arabic daily, *Al Bayan* (The Official Report). In addition, the UAE has three other Arabic dailies and two English dailies.

The government-owned UAE Broadcasting Service airs radio programs mainly from Abu Dhabi, which also has a television station, and from Dubayy. Other amirates also have radio stations, and Sharjah airs a small amount of television time.

Foreign Relations

Since obtaining full independence at the end of 1971, the UAE has focused on security concerns in its foreign relations. Indeed, it was uncertain in the early 1970s whether the UAE would endure as a viable state. Saudi Arabia, for example, refused to recognize the new federation because of a border dispute with Abu Dhabi over the Al Buraymi Oasis, subsequently resolved in 1974. Iran and Oman also contested UAE claims to certain territories. In addition, the discovery of extensive petroleum deposits in the 1960s prompted Iraq and other states to challenge the legitimacy of the UAE's ruling families. Because the UAE was a relatively small state, its leaders recognized that defending the country's security from both internal and external threats depended on skillful management of diplomatic relations with other countries, particularly larger and more powerful neighbors such as Iran, Iraq, and Saudi Arabia.

A principal goal of the UAE's foreign policy has been to contain the spillover effects of various regional crises. For example, during the initial years of UAE independence, a major insurrectionary movement threatened to overthrow the government in neighboring Oman. This movement also supported a group known as the Popular Front for the Liberation of Oman and the Arab Gulf, which aimed at establishing a republican regime in the UAE. During the mid-1970s, repercussions of the escalating civil war in Lebanon reverberated throughout the Persian Gulf. Subsequently, the Iranian Revolution of 1979, the civil war and Soviet intervention in Afghanistan, and the Iran-Iraq War all affected the UAE in various ways.

Despite its criticisms of United States policies toward the Palestinians, the UAE perceives its evolving relationship with the United States as providing a measure of protection from these crises. Thus, by 1990–91, when it joined with the United States in the military effort to force Iraq out of Kuwait, the UAE already had become a de facto member of the United States strategic umbrella over the region.

The Iraqi invasion and occupation of Kuwait were a shock to the UAE. Prior to that crisis, the UAE had tried to demonstrate solidarity on inter-Arab issues. In particular, it had supported the cause of Palestinian Arabs, both within the League of Arab States (Arab League), of which it was a member, and within international forums. In practical terms, this meant that the UAE did not recognize Israel. When Egypt signed a separate peace agreement with Israel in 1979, the UAE joined other Arab states in breaking diplomatic relations with Egypt. The UAE did not, however, expel the thousands of Egyptian workers in the UAE or interfere with their transfer of remittances home. For the UAE, the crisis over Kuwait demonstrated a lack of Arab unity on a critical Arab issue. The UAE joined the Arab states that opposed the Iraqi invasion and supported the use of force to compel Iraq's withdrawal of troops.

More fundamental for the UAE, this crisis exposed the failure of the GCC, of which the UAE had been a founding member in 1981, as a deterrent collective security organization. Although it was not prepared to abandon the GCC—it derived other benefits from this alliance with Bahrain, Kuwait, Oman, Qatar, and Saudi Arabia—the UAE believed that new security arrangements were necessary. The UAE initially supported expanding the GCC framework to include formal military ties with Egypt and Syria. When this option seemed unrealistic, the UAE concluded that a security relationship with the United States should be continued. Consequently, negotiations began during the summer of 1991 and continued for more than a year. In late 1992, officials of both countries signed an agreement that permitted the United States to use some UAE bases temporarily and to pre-position supplies on UAE territory.

The negotiations with the United States may have been a factor in the UAE's 1992 problems with Iran, a country that opposed a continuing United States military presence in the region. Like Iraq, Iran is a large neighbor—and a much closer one—with a recent history of policies that discomfited the UAE. Throughout the 1980s, the UAE had striven with difficulty to maintain neutrality in the Iran-Iraq War. That conflict was also a source of internal UAE tension because Abu Dhabi tended to support Iraq while Dubayy was more sympathetic to Iran. After the war ended in 1988, Iran appeared to single out the UAE for special and friendly attention. By 1992 the UAE was the Arab country with which Iran had the closest commercial relations.Thus, the crisis that erupted in April 1992 over disputed islands in the Persian Gulf seemed unexpected.

The dispute with Iran over the sovereignty of three small islands—Abu Musa, Greater Tumb, and Lesser Tumb—had been dormant for twenty years. It was rekindled in 1992 when Iranian officials on Abu Musa refused to permit UAE contract workers to disembark, in apparent contravention of a shared sovereignty agreement. Iran had claimed all three islands in 1970, before the UAE was formed. On the eve of independence in 1971, the amirate of Sharjah, which had jurisdiction over Abu Musa, accepted an agreement negotiated between London and Tehran that permitted Iran to establish a military garrison in the northern part of the island and allowed Sharjah to administer the civilian population living in the southern part. The agreement provided for Iran and Sharjah to share the proceeds from an offshore oil field but otherwise left the question of ultimate sovereignty to be resolved at some unspecified future time.

Greater Tumb and Lesser Tumb are two uninhabited islands claimed by Ras al Khaymah but occupied by Iran since 1971. Unlike Sharjah, Ras al Khaymah never accepted an Iranian claim to the islands and protested Britain's failure to interfere with Iran's occupation. Indeed, it was the amirate's anger over the 1971 occupation that caused it to refrain from joining the UAE for several months. In the midst of the 1992 crisis over Abu Musa, Ras al Khaymah resurrected its grievance over Greater Tumb and Lesser Tumb, thus enflaming an already delicate situation. At the end of the year, Iran and Sharjah quietly agreed to a restoration of the status quo ante the crisis, but the incidents left the UAE feeling wary of Iranian intentions.

In 1993 the UAE maintained relatively cordial relations with countries outside the Middle East. It was a member of the United Nations and its specialized agencies. It also was a member of the Organization of the Petroleum Exporting Countries and the Organization of the Islamic Conference.

* * *

The body of scholarly literature on the UAE gradually increased in the 1980s. A recent book, Malcolm C. Peck's *The United Arab Emirates,* provides a good account of UAE society, politics, and economy. Hassan Hamdan al-Alkim's *The Foreign Policy of the United Arab Emirates* gives a solid introduction to the subject. The history of the region from World War I until independence is presented with insight by Rosemarie Said Zahlan in her book, *The Origins of the United Arab Emirates.* A.O. Taryam's *The Establishment of the United Arab Emirates, 1950–85* gives a detailed discussion of the years immediately before and after the UAE's creation.

There are also informative chapters about the UAE in several earlier books, including Ali Mohammad Khalifa's *The United Arab Emirates: Unity in Fragmentation* and Enver Khoury's *The United Arab Emirates: Its Political System and Politics.* (For further information and complete citations, see Bibliography.)

Chapter 6. Oman

Crest of the Sultanate of Oman

Country Profile

Country

Formal Name: Sultanate of Oman.

Short Form: Oman.

Term for Citizens: Omani(s); adjectival form, Omani.

Capital: Muscat.

Geography

Size: About 212,000 square kilometers, although estimates vary.

Topography: Mostly desert; 15 percent of land mountainous. Four major regions: Musandam Peninsula, Al Batinah coastal plain, Oman interior, and Dhofar region.

Climate: Hot and dry, except for Dhofar, which has light monsoons.

Boundaries: Oman and Saudi Arabia signed agreement in 1990 to demarcate borders; Oman and Yemen signed agreement in 1992 to demarcate borders.

Society

Population: In 1992, for planning purposes, government estimated 2 million; actual figure may be closer to 1.5 million. Growth rate 3.5 percent in 1994. Foreigners estimated at 23.3 percent of population in 1992.

Education: Free public schools consist of primary level of six years, lower secondary level of three years, and upper secondary level of three years. Most teachers (60 percent) foreign.

NOTE—The Country Profile contains updated information as available.

Health: Improvement and expansion of health care facilities major ongoing government priority. In 1994 infant mortality estimated at thirty-seven per 1,000 population. In 1994 life expectancy at birth sixty-eight years on average, with sixty-six years for males and seventy years for females.

Ethnic Groups: Most Omanis are Arabs, although numerous citizens of non-Arab African origin. Foreign community includes Egyptians, Pakistanis, Indians, and others.

Religion: Most Omanis are Muslims; Ibadis constitute largest group.

Economy

Gross Domestic Product (GDP): In 1991 GDP about RO4.0 billion, or US$10.5 billion; per capita income RO2,696, or US$7,000.

Oil Industry: In 1991 accounted for about 43 percent of GDP, 95 percent of export earnings, and 82 percent of government revenues.

Agriculture and Fishing: Contributed about 3.8 percent of GDP in 1991.

Currency and Exchange Rate: Omani riyal. In 1994 exchange rate US$1 = RO0.3845 (fixed rate).

Fiscal Year: Calendar year.

Transportation and Telecommunications

Transportation: In 1992 about 6,000 kilometers paved roads and 20,000 kilometers gravel or earthen roads. Four-lane highway from Muscat along Gulf of Oman runs to Dubayy in United Arab Emirates. Major airport As Sib International Airport near Muscat. Major port Mina Qabus, near Muscat, being expanded in 1994; other major port at Raysut.

Telecommunications: Telecommunications internationally via satellites; domestic telephone service very limited but being expanded. Television available throughout Oman, but radio broadcast facilities limited.

Government and Politics

Government: Sultan Qabus ibn Said Al Said as head of state and prime minister presides over Council of Ministers. Consultative Council has advisory role but no legislative powers. No constitution.

Politics: No political parties. Important political actors are persons close to sultan, including Western-educated administrators and special advisers.

Foreign Relations: Member of United Nations and its specialized agencies, League of Arab States, Organization of the Islamic Conference, and Gulf Cooperation Council. June 1980 agreement allows United States use of military facilities in Oman.

National Security

Armed Forces: In mid-1993 Royal Armed Forces personnel strength 36,700, including 3,700 foreign personnel, as follows: Royal Oman Land Forces, 20,000; Royal Oman Navy, 3,500; Royal Oman Air Force, 3,500; and Royal Household, 6,000 (including Royal Guard of Oman, 4,500; Special Forces, 700; Royal Yacht Squadron, 150; and other, 650). Army primarily infantry force but has some tanks and armored cars. Navy a coastal patrol force, expanding and modernizing by acquiring guided missile (Exocet) craft and new gunboats. Air force has more than fifty combat aircraft, all of British manufacture.

SINCE 1970, WHEN OMAN'S RULER, Sultan Qabus ibn Said Al Said, assumed power, the sultanate has moved from a poor underdeveloped country toward a modern nation state. Indexes of development measuring per capita gross national product, infant mortality, literacy rates, and availability of social services validate the government's claim that its policies have effected positive change. Although the government's administrative structure expanded to accommodate public services, change in the political system has been slow. Oman remains a conservative monarchy, with the sultan relying on the support of a traditional political elite comprising the Al Said ruling family, established merchant families, and, to a lesser extent, tribal shaykhs.

Until the commercial production and export of oil in 1967, Oman's budget was exclusively dependent on religious taxes (*zakat*), customs duties, and British loans and subsidies. The bulk of this revenue served as a mechanism through which the sultan could co-opt his traditional allies among the merchant families and tribal shaykhs. By transferring income from the state treasury, the sultan was able to draw in influential segments of Omani society and ensure continuance of Al Said rule. Post-1970 economic developments were in part constructed on these antecedents. Income distribution remained a principal mechanism for ensuring political stability, but the network involved a state administrative structure rather than the more direct and personal individual-ruler relationship. Also, the system expanded to incorporate the average Omani through the creation of a public sector. The net effect has been the establishment of a salaried middle class whose economic interests are closely tied with the government.

Since the development of the country's infrastructure in the 1970s, national development plans have given priority to reducing dependency on oil exports and encouraging income-generating projects in non-oil sectors (diversification), promoting private-sector investment, and effecting a wider geographical distribution of investments to correct regional imbalances. Such a wider distribution is intended to narrow the gap in the standard of living in different regions, develop existing areas of population, and discourage migration to densely populated urban centers, such as Muscat (also seen as Masqat), the capital. Equally important are the national goals to develop local human resources, to increase indigenous participation in the private sector, and to improve government management and organization.

Constraints on the government in implementing its economic diversification program include the limited growth potential of alternative sectors, such as agriculture, fishing, and industry. Constraints also include the limited involvement of the private sector in businesses other than trade, the low-skilled labor force, the limited water resources, and the inability of government ministries to manage and expand services.

Sultan Qabus ibn Said, therefore, faced different challenges in 1993 than those he confronted when he assumed power in 1970 through a palace coup d'état. Then, the rebellion of tribes in the southern Dhofar (also seen as Zufar) region and the exploitation of the country's oil reserves had taken precedence.

Opportunities in urban centers stimulated a rural-urban shift, reducing the number of individuals engaged in agricultural labor and contributing to the key role of the oil sector in the economy. On the one hand, an increasingly urbanized population has the potential to be better educated and better enumerated. On the other hand, the small indigenous population has necessitated the presence of a large foreign labor force. This has contributed to an informal caste system, with Omanis clearly ranked highest in the hierarchy, followed by Westerners, with non-Western foreigners at the bottom.

Economic development has resulted in social transformation, not only in terms of diminishing the importance of the tribal element in Oman and stratifying Omani society but also in terms of inadvertently engendering a sense of entitlement among the public, common to social welfare states. In doing so, the government has been under increasing pressure to provide suitable employment for new migrants to the cities from village communities and to new graduates from colleges, to expand its social services, and to maintain the security of the country.

To fulfill these expectations, the government must ensure sustainable economic growth. Therefore, the policies of diversification and indigenization have taken on greater importance. Diversification is needed to ensure growth in the post-oil era; indigenization potentially eliminates the demand for foreign labor and increases opportunities for Omani nationals. The problems of the 1990s are resistant to change, however. The depletion of the country's proven oil reserves (at the production rate of 1992, reserves will be depleted within seventeen years) heightens the need for economic diversification, but so far, non-oil sectors have shown limited potential.

The net effect of the government's policies has been to link economic conditions with political stability. The suppression of the Dhofar rebellion in the first half of the 1970s provided a lesson for Sultan Qabus ibn Said. By addressing the gross economic neglect of the south, the government was able to ensure some political quiescence. In providing the majority of Omanis with adequate income through employment in the public sector, health and medical services, education, and other social services, the government has similarly ensured a modicum of public political support.

Geography and Population

Geography

Oman is located in the southeastern quarter of the Arabian Peninsula and, according to official estimates, covers a total land area of approximately 300,000 square kilometers; foreign observer estimates, however, are about 212,000 square kilometers, roughly the size of the state of Kansas. The land area is composed of varying topographic features: flat or rolling terrain covered with desert accounts for 82 percent of the land mass; mountain ranges, 15 percent; and the coastal plain, 3 percent.

The sultanate is flanked by the Gulf of Oman, the Arabian Sea, and the Rub al Khali (Empty Quarter) of Saudi Arabia, all of which contributed to Oman's isolation. Historically, the country's contacts with the rest of the world were by sea, which not only provided access to foreign lands but also linked the coastal towns of Oman. The Rub al Khali, difficult to cross even with modern desert transport, formed a barrier between the sultanate and the Arabian interior. The Al Hajar Mountains, which form a belt between the coast and the desert from the Musandam Peninsula (Ras Musandam) to the city of Sur at Oman's easternmost point, formed another barrier. These geographic barriers kept the interior of Oman free from foreign military encroachments (see fig. 13).

Natural features divide the country into seven distinct areas: Ruus al Jibal, including the northern Musandam Peninsula; the Al Batinah coastal plain; the Muscat-Matrah coastal area;

Figure 13. Oman, 1993

the Oman interior, comprising Al Jabal al Akhdar (Green Mountain), its foothills, and desert fringes; the barren coastline south to Dhofar; the Dhofar region in the south; and the offshore island of Masirah.

The northernmost area, Ruus al Jibal, extends from the Musandam Peninsula to the boundary with the United Arab Emirates (UAE) at Hisn Diba. It borders the Strait of Hormuz, which links the Persian Gulf with the Gulf of Oman, and is separated from the rest of the sultanate by a strip of territory belonging to the UAE. This area consists of low mountains forming the northernmost extremity of the Al Hajar al Gharbi (Western Al Hajar) Mountains. Two inlets, Elphinstone (Khawr ash Shamm) and Malcom (Ghubbat al Ghazirah), cleave the coastline about one-third the distance from the Strait of Hormuz and at one point are separated by only a few hundred meters of land. The coastline is extremely rugged, and the Elphinstone Inlet, sixteen kilometers long and surrounded by cliffs 1,000 to 1,250 meters high, has frequently been compared with fjords in Norway.

The UAE territory separating Ruus al Jibal from the rest of Oman extends almost as far south as the coastal town of Shinas. A narrow, well-populated coastal plain known as Al Batinah runs from the point at which the sultanate is reentered to the town of As Sib, about 140 kilometers to the southeast. Across the plains, a number of wadis, heavily populated in their upper courses, descend from the Al Hajar al Gharbi Mountains to the south. A ribbon of oases, watered by wells and an underground channel (*falaj*) system, extends the length of the plain, about ten kilometers inland.

South of As Sib, the coast changes character. For about 175 kilometers, from As Sib to Ras al Hadd, it is barren and bounded by cliffs almost its entire length; there is no cultivation and little habitation. Although the deep water off this coast renders navigation relatively easy, there are few natural harbors or safe anchorages. The two best are at Muscat and Matrah, where natural harbors facilitated the growth of cities centuries ago.

West of the coastal areas lies the tableland of central Oman. The Al Hajar Mountains form two ranges: the Al Hajar al Gharbi Mountains and the Al Hajar ash Sharqi (Eastern Al Hajar) Mountains. They are divided by the Wadi Samail (the largest wadi in the mountain zone), a valley that forms the traditional route between Muscat and the interior. The general elevation is about 1,200 meters, but the peaks of the high ridge known as Al Jabal al Akhdar—which is considered a separate area but is actually part of the Al Hajar al Gharbi Mountains—rise to more than 3,000 meters in some places. Al Jabal al Akhdar is the only home of the Arabian *tahr*, a unique species of wild goat. In the hope of saving this rare animal, Sultan Qabus ibn Said has declared part of Al Jabal al Akhdar a national park. Behind the Al Hajar al Gharbi Mountains are two inland regions, Az Zahirah and inner Oman, separated by the lateral range of the Rub al Khali. Adjoining the Al Hajar ash Sharqi Mountains are the sandy regions of Ash Sharqiyah and Jalan, which also border the desert.

The desolate coastal tract from Jalan to Ras Naws has no specific name. Low hills and wastelands meet the sea for long distances. Midway along this coast and about fifteen kilometers offshore is the barren island of Masirah. Stretching about seventy kilometers, the island occupies a strategic location near the entry point to the Gulf of Oman from the Arabian Sea. Because of its location, it became the site of military facilities used first by the British and then by the United States, following an access agreement signed in 1980 by the United States and Oman and most recently renewed in 1990.

The Dhofar region extends from Ras ash Sharbatat to the border with Yemen. Its exact northern limit has never been defined, but the territory claimed by the sultan includes the Wadi Mughshin, about 240 kilometers inland. The southwestern portion of the coastal plain of Dhofar is regarded as one of the most beautiful in Arabia, and its capital, Salalah, was the permanent residence of Sultan Said ibn Taimur Al Said and the birthplace of the present sultan, Qabus ibn Said. The highest peaks are about 1,000 meters. At their base lies a narrow, pebbly desert adjoining the Rub al Khali to the north.

Climate

With the exception of the Dhofar region, which has a light monsoon climate and receives cool winds from the Indian Ocean, the climate of Oman is extremely hot and dry most of the year. Summer begins in mid-April and lasts until October. The highest temperatures are registered in the interior, where readings of more than 50°C in the shade are common. On the Al Batinah plain, summer temperatures seldom exceed 46°C, but, because of the low elevation, the humidity may be as high as 90 percent. The mean summer temperature in Muscat is 33°C, but the *gharbi* (literally, western), a strong wind that blows from the Rub al Khali, can raise temperatures from the towns on the Gulf of Oman by 6°C to 10°C. Winter temperatures are mild and pleasant, ranging between 15°C and 23°C.

Precipitation on the coasts and on the interior plains ranges from twenty to 100 millimeters a year and falls during mid- and late winter. Rainfall in the mountains, particularly over Al Jabal al Akhdar, is much higher and may reach 700 millimeters. Because the plateau of Al Jabal al Akhdar is porous limestone, rainfall seeps quickly through it, and the vegetation, which might be expected to be more lush, is meager. However, a huge reservoir under the plateau provides springs for low-lying areas. In addition, an enormous wadi channels water to these valleys, making the area agriculturally productive in years of good rainfall. Dhofar, benefiting from a southwest monsoon between June and September, receives heavier rainfall and has constantly running streams, which make the region Oman's most fertile area.

Population

A comprehensive population census has never been conducted, but in 1992 the sultanate solicited help from the United Nations (UN) Fund for Technical and Financial Assistance in taking a full census. For planning purposes, the government in 1992 estimated the population at 2 million, but the actual figure may be closer to 1.5 million, growing at a rate of 3.5 percent per annum. The population is unevenly distributed; the coastal regions, the Al Batinah plain, and the Muscat metropolitan area contain the largest concentration.

Omanis live mainly in rural areas, but urban locations also exist. The major city is Muscat, the capital. In the Al Batinah plain in the north, the largest town is Suhar. Farther south, in the hilly region of Al Jabal al Akhdar, lies the town of Nazwah. Salalah is a major center for the Dhofar region.

The population is heterogeneous, consisting of an ethnic and religious mix derived in large part from a history of maritime trade, tribal migrations, and contacts with the outside world. Although Arabs constitute the majority, non-Arab communities include Baluchis—from the Makran coast of Iran and Pakistan—who are concentrated in Muscat and the Al Batinah coast and play a significant role in the armed forces; ex-slaves (a legacy of Oman's slave trade and East African colonies); and Zanzibari Omanis, who are well represented in the police force and the professions. The integration of Omanis of African descent is often circumscribed by a language barrier (they often speak Swahili and English but not always Arabic). The presence of Omanis of Indian descent in Muscat reflects the historical commercial ties between the sultanate and the Indian subcontinent. The Khoja community in Matrah, of Indian origin, is perhaps the richest private group in Oman, and its members are among the best educated. The Shihuh of the northern Musandam Peninsula numbered about 20,000 in the early 1990s. They speak Arabic and a dialect of Farsi and engage primarily in fishing and herding.

Because of the small indigenous population, the government has been obliged to use foreign labor. In 1992 about 60 percent of the labor force was foreign. Some 350,000 foreign workers and their families (primarily Indians, Pakistanis, Bangladeshis, Filipinos, and Sri Lankans) live in Oman. The high percentage of foreigners in the work force, combined with improvements in the country's education system, has prompted the government to institute a program of indigenization whereby Omani nationals gradually replace foreigners (see Labor, this ch.).

Society

Religion

The majority of Omanis are Ibadi Muslims, followers of Abd Allah ibn Ibad (see Shia Islam, ch. 1). Approximately 25 percent are Sunni (see Glossary) Muslims and live primarily in Sur and the surrounding area and in Dhofar. They form the largest non-Ibadi minority. The Shia (see Glossary) minority lives along the Al Batinah coast in the Muscat-Matrah region. This minority includes the Khoja, the Baharina of Iraqi or Iranian descent, and the Ajam, of vague origin but generally considered to originate in Iran.

Ibadism is an outgrowth of the Kharijite movement, a variant form of Islam practiced by descendants of a sect that seceded from the principal Muslim body after the death of the Prophet Muhammad in A.D. 632. Kharijites reject primogeniture succession of the Quraysh, the tribe of Muhammad, and assert that leadership of Islam, the caliphate, should be exercised by an imam (see Glossary) elected by the community from candidates who possess spiritual and personal qualities. Ibadi leadership is vested in an imam, who is regarded as the sole legitimate leader and combines religious and political authority. The imam is elected by a council of prominent laymen or shaykhs (see Glossary). Adherence to Ibadism accounts in part for Oman's historical isolation. Considered a heretical form of Islam by the majority Sunni Muslims, Ibadis were not inclined to integrate with their neighbors.

Education

As in other sectors of Omani society, the education system was radically altered after the accession of Sultan Qabus ibn Said. Prior to 1970, there were only three primary schools in the sultanate—in Muscat, Matrah, and Salalah. These were reserved for approximately 900 boys personally selected by the sultan from among many applicants. Additionally, in Muscat there was a religious institute with an enrollment of fifty boys, three private schools for Hyderabadis (Indians), and one United States missionary school serving fifty foreign girls. Sultan Qabus ibn Said initiated a shift in the government's policies and priorities from neglect to expansion of the school system, increasing the public's access to general education.

The education system is guided by the policy-making body of the Council for Education chaired by the sultan and operated by the Ministry of Education and Youth. General education is divided into three levels: primary (grades 1–6); lower secondary (grades 7–9); and upper secondary (grades 10–12). Teacher-training colleges provide training programs for primary and lower secondary school teachers.

Education accounted for a modest 11.2 percent of the government's current expenditures in 1990, up from only 2.4 percent in 1975 but still considerably less than the 28 percent planned and less than the proportion recorded by other countries in the process of expanding their school systems. By the 1989–90 academic year, the percentage of students enrolled in primary schools was almost 100 percent in the respective age-group, compared with 53 percent in 1977–78 (see table 32, Appendix). The percentage of girls attending primary schools also rose rapidly during this period, from 37 percent in 1977–78 to 97 percent in 1989–90. The student-teacher ratio at the primary level was twenty-seven to one in 1988–89. Secondary school enrollment lagged behind primary school attendance and rose from 8 percent of secondary-school-age youth in 1977–78 to 48 percent in 1989–90. In 1986 Sultan Qabus University opened at Al Khawd, west of Muscat, with faculties of agriculture, education, engineering, Islamic studies, medicine, and science. Faculties for commerce, economics, and the arts are planned.

Rapid expansion and enrollment have exceeded the capacity of the ministry to plan and administer the system. This has produced problems in planning, budgeting, curriculum development, and teacher training. Often, inappropriate sites for facilities are selected, and programs are of poor quality or unavailable. Lower secondary education remains underdeveloped, contributing to the low enrollment rates in upper secondary school, particularly for females.

The government emphasizes teacher training for Omanis, in order to create an indigenous teaching force. The dependency on foreign staff, and hence the high turnover rate and lack of continuity, further compromises the quality of education. In the 1980–81 academic year, 618 of a total 5,663, or 11 percent of the teaching staff, were Omanis. By the 1985–86 academic year, the number had increased to 18 percent. The majority of ministry employees (55 percent in 1990) are non-Omanis, of whom more than 70 percent are Egyptians; the balance consists of Jordanians, Pakistanis, Sudanese, Indians, Filipinos, and others. As of 1990, there were six teacher-training colleges providing a two-year program and enrolling a total of about 700 students. Secondary school teachers receive training at the Faculty of Education at Sultan Qabus University.

The government's medium-term objectives are to ensure that all six-year-olds are enrolled in primary school and to expand access to primary and secondary education in rural areas. The government also seeks to expand teacher-training facilities; to increase the number of trained nationals staffing schools by increasing the number of teacher-training colleges; to improve teacher-class ratios and school-building operations; and to introduce student testing and new programs.

Health

Developments in the health and medical sector paralleled those in education. In 1970 there was one twelve-bed hospital operated by United States missionaries and nine government health centers. In 1990 there was a total of forty-seven hospitals, compared with fourteen in 1980. The number of doctors increased from 294 to 994 in the same ten-year period, and the number of nurses more than quadrupled from 857 to 3,512.

The government's health policy is directed at achieving a level of health care that approaches its goal of Health for All by the Year 2000. Included among the health priorities of the Ministry of Health are strengthening curative services, particularly in urban areas, and improving preventive services, with the emphasis on communicable diseases and immunization. The Public Health Department of the Ministry of Health is responsible for mass immunizations for smallpox and other infectious

Sultan Qabus University at Al Khawd, west of Muscat
Sultan Qabus ibn Said Al Said presenting gifts to the first graduates of Sultan Qabus University
Courtesy Embassy of the Sultanate of Oman, Washington

diseases. The government stresses delivering maternal and child health care at the village level to decrease the infant mortality rate, estimated in mid-1992 at forty-four per 1,000 population. Life expectancy in mid-1992 was sixty-four years for males and sixty-eight years for females. The government is also expanding its education program, especially with regard to maternal and child health care. In July 1987, the country held its first workshop on acquired immune deficiency syndrome (AIDS) to increase awareness of the problem in the medical community. Contraceptives are available at private hospitals and dispensaries and through commercial outlets. Abortion is illegal except when the mother's life is endangered.

Although adequate health facilities exist in urban centers, coverage in rural areas remains insufficient. As a result, the government is continuing to develop health services as an integral part of national development. The Fourth Five-Year Development Plan (1991–95) allocated RO48 million (for value of the Omani riyal—see Glossary), which is equivalent to US$124.7 million, for this purpose. Ministry of Health plans include a 100-bed hospital in Al Buraymi and a 200-bed hospital at Ar Rustaq, southeast of Qurayyat, to replace the existing medical facility in Ar Rustaq and to serve as a central, referral hospital for the region. Other projects include replacing all outpatient clinics at the Royal Hospital polyclinic in the capital and building a new 200-bed hospital at Ibri and a 200-bed hospital at Tanam, in the interior north of Ibri.

The Economy

Omani economic development may be divided into three phases: a period of rapid expansion between 1970 and 1986; economic retrenchment and rationalization between 1986 and 1989 as a result of the 1985–86 oil price collapse; and a period of stabilized growth since 1990. Economic growth and structural change have proceeded rapidly in Oman during the rule of Sultan Qabus ibn Said. Oman, however, lagged behind such neighboring gulf amirates as Kuwait and the UAE as a result of the late discovery of oil, financial constraints, and political instability in the first half of the 1970s. Nonetheless, increased government expenditure as a result of the commercial production and export of oil transformed the standard of living in Oman. By the latter half of the 1980s, Oman emerged as a middle-income country after entering the development process as one of the poorest Arab states. Per capita income rose from US$360 in 1970 to US$3,140 in 1980 and to US$7,000 in 1991.

When Sultan Qabus ibn Said assumed power in 1970, he immediately implemented an economic development and modernization program. Priority was given to expanding the country's almost nonexistent infrastructure. In the early 1970s, substantial progress was made in developing physical and social infrastructure, mainly in the form of roads, a new deepwater port, an international airport, electricity-generating plants, desalination plants, and schools, hospitals, and low-cost housing. Government revenue derived almost exclusively from oil receipts made this possible.

Economic growth was accompanied by uneven structural development, however. In 1960 agriculture accounted for 75 percent of the gross domestic product (GDP—see Glossary); by Oman's fiscal year 1991, its share had fallen to less than 3 percent. By contrast, industry (including petroleum), which accounted for only 8 percent of GDP in 1960, increased to 59 percent by 1985. Manufacturing increased only from 1 percent to 3 percent and services from 18 percent to 38 percent in the same period.

As a result, in 1993 Oman's economy was dominated by the petroleum and the services sectors. Aware of the vulnerability produced by dependency on a depletable natural resource, the government has increased funding for sectors based on renewable natural resources that can provide sustainable economic growth. The government is concentrating on the agriculture and fishing sectors, encouraging tourism, and constructing light industrial parks with the objective of exporting consumer goods to its Gulf Cooperation Council (GCC) partners.

Public Finance and the Five-Year Development Plans

Prior to 1970, the financial position of the sultan was virtually synonymous with the public finances of the sultanate. After Qabus ibn Said's accession to the throne, a formal separation was initiated. The first government budget was announced in 1971, and the First Five-Year Development Plan was initiated in 1976.

After recovering somewhat in 1987 after the collapse of oil prices in 1986, government revenue fell again in 1988 to RO1,198 million (see table 33, Appendix). Iraq's invasion of Kuwait resulted in a sharp rise in oil prices: average crude oil spot prices increased from US$16 per barrel in July 1990 to almost US$40 per barrel in September. Higher oil prices resulted in increased 1990 oil revenues, up 38 percent from 1989. The restoration of the Al Sabah monarchy in Kuwait and the defeat of Iraqi forces by an allied coalition stabilized the international oil market's uncertainty about supplies, and prices collapsed to precrisis levels. Omani government revenues dropped to RO1,570 million in 1991, from RO1,859 million in 1990. The government budget for 1992 was based on an estimate that total revenues would increase to RO1,628 million as a result of slightly higher oil income and as a result of increases in gas revenues and other domestic indirect taxes.

Although the government stresses investment, government expenditures are largely current expenditures, suggesting the importance the government places on maintaining its security, against both internal and external threats, and on its civil administration. Public corporations and ministries have provided a mechanism for income distribution and the creation of a salaried middle class. Reducing expenditures through public-sector cuts is regarded as politically sensitive and therefore has been avoided, even after the oil price collapse in the mid-1980s and the associated loss of income.

The 4.3 percent per annum increase in total expenditures after 1986 largely resulted from these concerns. Between 1987 and 1991, total government spending rose from RO1,576 to RO1,853 million. During this period, current expenditures grew at 5 percent per annum. Although barely keeping pace with domestic inflation and increasing at a slower growth rate than that of the preceding ten years—when current outlays rose at 19.7 percent per annum—maintaining domestic income and defense and security expenditures prevented any retrenchment, despite wild fluctuations in income. Capital expenditures, however, had to be reduced between 1987 and 1990 and fell by 4 percent per annum. Higher oil prices in 1991 allowed the government to boost investment spending to pre-1986 levels, with a 37 percent increase over 1990. This adjustment restored the share of capital outlays in total government spending to 23 percent, after falling to about 12 percent in 1990. The 1992 budget called for further increases in spending to RO1,876 million, of which capital expenditures were slated to rise to RO404 million, or 22 percent of the total.

With the exception of a short period in the early 1980s, the government budget has registered sizable deficits. During 1986 the deficit (RO700 million) peaked at 28 percent of GDP. It was sharply reduced during the latter half of the 1980s but has continued to hover close to 10 percent of GDP. A lag in increased spending to match the rise in oil revenues late in 1990 permitted the government almost to balance the budget. But in 1991 spending more than offset oil revenues, and the actual budget deficit rose to RO283 million, or 10 percent of GDP. The 1992 budget forecast indicated another deficit of this magnitude.

The government has financed these budget deficits by drawing down on the Contingency Fund and by small amounts of commercial borrowing. Economic difficulties have compelled the government to raise money on international capital markets. In 1986 the government received a US$500 million syndicated Euroloan, the major sponsors of which were Gulf International Bank (in which the government is a shareholder) and Chase Investment Bank. In 1988 the government obtained a Japanese yen-denominated loan valued at US$130 million and a second US$100 million loan. Balanced fiscal conditions permitted the authorities to pay some of Oman's debt outstanding in 1990. During 1991 and 1992, authorities instituted a domestic development bond scheme, which has financed roughly one-half the fiscal shortfall.

The Fourth Five-Year Development Plan (1991–95) projected government revenue at RO8,571 million, up 22.8 percent from the previous plan. Oil revenue is expected to account for more than 76 percent of total revenue and to increase by an average of about 5 percent each year, reaching RO1,785 million in 1995 on a gross basis and RO1,429 million on a net basis (that is, gross oil revenues less subventions to the State General Reserve Fund and the Contingency Fund). The plan was based on an assumed average oil price of US$20 per barrel in the five years. During the first two years of the plan, total revenues roughly kept pace with planned earnings because oil prices held at those levels.

Expenditures during the Fourth Five-Year Development Plan were set at RO9,450 million, with current expenditures accounting for 76 percent of the total, investment expenditures set at 22 percent, and additional support to the private sector set at 1.4 percent. Defense and national security and civil ministries continue to make up the bulk of current expenditures. With expenditures exceeding revenues, the government projects a cumulative deficit of RO879 million. The government plans to finance the deficit by issuing RO430 million in government bonds on the Muscat securities market and by further drawdowns on the Contingency Fund.

The State General Reserve Fund is to be strengthened by allocating 15 percent of oil revenues to the fund, up from the previous 5 percent. This policy change was made possible after the creation of the Contingency Fund in 1990, which receives 7.5 percent of net oil revenues if the oil price is US$18 to US$20 per barrel and 10 percent if the oil price rises to US$20 to US$22 per barrel. Both policies are directed toward smoothing out the effects of oil price fluctuations and reducing the economy's vulnerability to unexpected changes in the international oil market.

Foreign Trade and the Balance of Payments

Oman's exports are dominated by oil earnings. Total exports peaked in 1985 at almost US$5.0 billion before the oil price collapse in 1986. During the preceding decade, exports rose by a factor of 3.5, largely because of the higher volume of crude and refined product sales overseas and the sustained rise in international oil prices. Petroleum exports constituted 98 percent of foreign merchandise earnings in 1985. Exports declined to US$2.9 billion in 1986 but have steadily risen since then as a result of further increases in the volume of oil shipped and higher oil prices. In 1990 total exports rose to US$5.5 billion, of which oil exports were just under US$5.2 billion (see table 34, Appendix). Non-oil exports accounted for only 3.4 percent of total exports in 1990, up from 2 percent in 1986. The bulk of non-oil exports includes livestock and some metals. Oman also made considerable strides in increasing textile and mineral exports during the early 1990s. Most exports go to other Middle Eastern countries, followed by Japan and other Asian countries (see table 35, Appendix).

Domestic government expenditures and rising incomes have stimulated a steady increase in merchandise imports. Total imports rose from US$907 million in 1975 to a peak of US$3 billion in 1985 before economic retrenchment and weaker domestic economic conditions caused a slight reduction in foreign purchases. After falling to below US$2 billion in 1987, imports increased to US$3.3 billion in 1991 because of the improved oil revenue situation and the onset of the Fourth Five-Year Development Plan. Development goods, notably machinery and transportation equipment, and defense items dominate the imports profile. In 1991 machinery and transportation items constituted 42 percent of the total import bill, and other manufactured goods made up 18 percent. Oman's total food imports fell in 1991 to 18 percent from a mid-1980s average of 20 percent. Imports came mostly from other Middle Eastern countries and from Japan.

Despite the vagaries of international oil markets and sharp fluctuations in oil prices, Oman has succeeded in maintaining a surplus on its merchandise trade account, except in 1986. A deficit in the services account, however, continues to constitute a leakage in the government's external position. Workers' remittances and payments on external debt account for more than one-half of the services deficit. Although the net outflow from workers' remittances slowed after the mid-1980s because of the recessionary climate in the region and the reduction in the number of foreign workers, the value of workers' remittances constituted just under US$1 billion per annum on the balance of payments. The program of indigenization was intended to reduce this leakage, but limited local manpower skills remain a bottleneck for indigenization. Interest on the foreign debt is the second largest item of services imports. It peaked at US$320 million in 1990 but declined in 1991 as a result of lower international interest rates and some repayment of the foreign debt. Interest receipts on official and commercial bank assets abroad (totaling US$350 million in 1991) are insufficient to offset services outflows.

During the 1980s, Oman registered sizable surpluses on its current account. In 1981 the surplus reached just over US$1 billion; it tapered off rapidly thereafter with the decline in oil prices. In 1986 Oman registered a deficit just over US$1 billion on its current account, recovered to a US$784 million surplus in 1987, a smaller deficit in 1988, and a surplus in 1989. Higher oil prices in 1990 boosted the balance to a record US$1.2 billion surplus, but a rapid rise in imports and some weakening in external earnings left the current account in balance in 1991.

Before 1986 the capital account was dominated by increases in external reserves. The cumulative increase in external assets of the government was US$2.5 billion between 1978 and 1985. Despite a shrinking surplus on the current account, the government could raise foreign assets because of a sizable program of foreign borrowing and direct foreign investment, mainly in the oil sector. In 1986 the government had to reduce foreign reserves by US$612 million to fortify the capital account. This was necessary despite nearly US$765 million in loans secured on international markets. Since then, continued access to international loan markets and a steady rise in foreign direct investment, not to mention higher oil prices, have permitted the government to replenish foreign assets. At the end of 1991, the government's published foreign assets totaled US$1.6 billion; the World Bank (see Glossary) estimate of Oman's foreign debt at the end of 1990 was US$2.5 billion.

Hydrocarbon Sector

Since the first commercial field was discovered at Jibal, west of Adam, in 1962, the petroleum industry has dominated the economy. In 1991 the industry contributed about 43 percent of GDP and 82 percent of government revenues. The government's heavy reliance on crude oil export earnings to maintain its income distribution system and political stability made continued development of this sector a priority.

By early 1977, the newly organized Ministry of Petroleum, Fisheries, and Agriculture prematurely assumed that production had probably peaked at more than 350,000 barrels per day (bpd—see Glossary) and would decline. Exploration activity in the south was insignificant, deterred by political instability in the region, and production at the main fields of Petroleum Development Oman (PDO) in the north, including Jibal, was in decline (see fig. 14). The suppression of the Dhofar rebellion in the mid-1970s helped reverse an output decline. Foreign exploration companies, satisfied with the restoration of political stability, began to sign area exploration and production agreements with the government. Enhanced oil recovery (EOR) techniques at existing fields, combined with new fields coming onstream, raised average output to 708,000 bpd in 1991.

The principal problem the government faced in the early 1990s was a diminishing reserve base. Proven reserves were estimated at 4.6 billion barrels in 1992, small in comparison with other gulf states. At the mid-1992 rate of production of 725,000 bpd, Oman's crude reserves are sufficient to permit seventeen years of output, compared with nearly 350 years for Saudi Arabia.

Oil prospecting began in 1924 when the Anglo-Persian Oil Company (later renamed British Petroleum) obtained a concession; however, unsuccessful exploratory drilling discouraged further interest. Discoveries in Bahrain and Saudi Arabia during the 1930s stimulated exploration activity. The first concession agreement was signed with Petroleum Concessions, a Western consortium formed by the owners of the Iraq Petroleum Company (IPC). In 1951 the concessionaire's name was changed to Petroleum Development Oman (PDO). In 1993 PDO remained the principal operating company and controlled the bulk of oil reserves and output.

After several years of costly and unsuccessful exploratory drilling, most IPC partners wanted to withdraw from their concession area. In 1960 Royal Dutch Shell acquired an 85 percent interest in PDO; Participations and Explorations (Partex) held the remaining 15 percent share. In 1967 the French firm Total-Compagnie Française des Pétroles acquired 10 percent of Partex's 15 percent interest. In December 1973, the government of Oman, following the participation agreements negotiated by several gulf countries, acquired a 25 percent share of PDO. In July 1974, the government's stake was raised to 60 percent, retroactive to January 1, 1974. Since 1974 the remaining 40 percent has been held by Royal Dutch Shell with 34 percent, Total-Compagnie Française des Pétroles with 4 percent, and Partex with 2 percent.

PDO operates two main production areas: a group of northern oil fields, including Jibal, Fuhud, and Sayh Nuhaydah, that produce lighter grades of crude oil; and a group of southern fields, including Rima, Mamul, Amal, Nimr, Mukhaizna, and Sayyala, that produce heavier crudes. Development of the southern fields took place after the suppression of the Dhofar rebellion and the reestablishment of political stability in the sultanate.

Reserves

As of January 1992, official proven crude reserves were estimated at 4.6 billion barrels, up almost 6 percent from 1991 and up 83 percent from the oil reserve estimate in 1980. The relatively gradual increments to Oman's reserve base since 1980 were attributable to the discovery of new, smaller oil fields and revised estimates for existing fields.

More than one-half of Oman's total reserves are concentrated in the northern region, where six fields—Jibal, Natih, Fuhud, Al Huwaysah, Al Khuwayr, and Shaybikah—are part of a single geological structure containing recoverable reserves of more than 2 billion barrels. Similarly, in the south, eight principal producing fields also come from a single geological structure.

Figure 14. Oman: Oil Fields, Gas Fields, and Refineries, 1993

Several foreign companies that are engaged in exploration and production activities, such as France's Elf Aquitaine Oman, the Occidental Petroleum Corporation (Occidental Oman), and the American Oil Company (Amoco), signed agreements in the 1970s. Others, such as the Japan Exploration Company (Japex Oman) and Canada's International Petroleum, followed in 1981 and 1984, respectively.

Oil Production and Exports

During the period from 1967 to 1980, crude oil production peaked in 1976 at 365,000 bpd but subsequently declined. Producing fields are concentrated in the northern region around Jibal, Fuhud, and Natih, all three of which were discovered in the 1960s. The Dhofar rebellion inhibited exploration farther south and suspended development activity around Mamul, discovered in 1957 and holding 600 million barrels of gross proven and probable oil reserves. Because of the declining production from northern fields, total output fell. In 1979 average output was 285,000 bpd.

Once hostilities ceased in 1975 and confidence in the authority of the central government returned, southern exploration and production activities resumed, facilitating new discoveries in the late 1970s and 1980s. The Rima field, with gross proven and probable reserves estimated at 270 million barrels, was discovered in 1979; Amal, with 145 million barrels of reserves, was discovered in 1982; and Mukhaizna, with 130 million barrels, was discovered in 1985. All were brought onstream by PDO. As a result, oil output increased throughout the 1980s. Crude oil production averaged 708,000 bpd in 1991, compared with 685,000 bpd in 1990 (see table 36, Appendix). Output for 1992 averaged 745,000 bpd. Most of this, about 670,000 to 680,000 bpd, was lifted by PDO. According to Minister of Petroleum and Minerals Said Ahmad ash Shanfari, there are plans to maintain output at that level into the twenty-first century.

Apart from PDO, which contributes the bulk of the output, three other groups have interests in the producing fields. These are Occidental Oman (28,000 bpd), Elf Aquitaine Oman (15,000 bpd), and Japex Oman (8,000 bpd).

To maintain output at current levels and avoid future declines, the government is pursuing a two-pronged strategy of developing smaller fields and applying EOR and secondary techniques at existing fields. The strategy appears successful because 1992 was the twelfth consecutive year in which production increased. However, a pattern has emerged whereby the number of fields discovered holding large (greater than 500 million barrels of gross proven and probable) reserves has been declining. The potential for discovering fields with a reserve base and production rates comparable to Jibal appears remote, given Oman's mature exploration history.

EOR techniques are applied to the mature fields. In the north, additional wells have been drilled, and water injection facilities have been constructed at the Jibal field. Gas injection is used at Fuhud and Natih. At Mamul, in the south, high-pressure steam injection techniques have been used since 1985.

Most of the increase in output will come from PDO's Al Khuwayr field in north-central Oman, where a US$500 million development project was designed to increase the field's output from 25,000 bpd to more than 120,000 bpd when completed in 1993. The project involves gas lift and water injection facilities. Output will compensate for falling output from existing producing fields. Apart from the pilot waterflood project at Al Khuwayr, near Izki, the Sayh Nuhaydah gas-condensate field is a potential candidate for an analogous waterflood development program.

More than 90 percent of oil production is exported. The majority of Oman's exports are destined for the Far East market. Japan, the Republic of Korea (South Korea), Singapore, China, Taiwan, Thailand, and the Philippines accounted for 85 percent of total crude exports in 1990. Japan accounted for 40 percent of total exports, South Korea for 26 percent, and Singapore for 7 percent. Less than 7 percent of crude exports was destined for the United States market.

All crude oil from the northern and southern fields is collected and blended into Omani export blend. The country's only refinery and terminal is at Mina al Fahl, near Muscat. The refinery, completed in 1982 with an initial throughput capacity of 50,000 bpd and expanded to 80,000 bpd in 1987, was designed to meet domestic demand for petroleum products. Operated by the Oman Oil Refinery Company, in which the Ministry of Petroleum and Minerals holds a 99 percent share and the Central Bank of Oman holds 1 percent, the refinery produces liquefied petroleum gas (LPG), butane, jet fuel, and two grades of gasoline.

Foreign Downstream Ventures

The Oman Oil Company (OOC), established in the late 1980s, is responsible for the government's foreign petroleum activities. The board of directors consists of former government officials and private advisers and is responsible to the Ministry of Petroleum and Minerals. The OOC engages in international oil trading, including the purchase and sale of Omani crude oil, and in acquiring foreign downstream (see Glossary) holdings. Acquiring foreign downstream holdings is the most recent development in the ministry's oil policies, lagging behind such other Arab oil producers as Kuwait, Saudi Arabia, and Libya, which have actively pursued foreign downstream ventures to ensure a secure market for crude oil sales.

As of late 1992, the OOC was negotiating equity interest in a foreign downstream venture, the acquisition of a 20 percent stake in Thailand's fifth refinery, in Rayong Province in the south. The refinery is designed to process up to 120,000 bpd of crude and will cost US$600 million. Operations are scheduled to begin in 1996 and will involve Oman's supplying part of the refinery's feedstock. Also, as a member of a consortium including Chevron Corporation of the United States, the OOC has committed itself to build an export pipeline to transport oil from the Tengiz and Korolyov fields in Kazakhstan to international markets. The pipeline complements an agreement signed on June 18, 1992, by the government of Oman with Kazakhstan for exploration and production of oil and gas in the former Soviet republic. The Tengiz and Korolyov fields are said to have a potential output of 700,000 bpd by 2010.

Gas Development and Production

The depletion of the sultanate's crude oil reserves accelerated the government's bid to increase the use of gas in electric power generation and industry. In the early 1970s, the sultanate began to use gas in electric power generation. Gas pipelines were laid, and generators were converted from diesel to gas. This was done in the Muscat metropolitan area just before the second oil price shock despite resistance by importers of diesel. Plans were to increase gas use by extending the government gas grid linking the south and the east to the north. Power generation facilities north of Muscat in 1992 were using gas as a feedstock, and plans were to increase gas-fired units elsewhere.

Although the government has promoted the industrial use of gas, oil firms remain the principal consumers, using a total of 8.5 million cubic meters per day of associated gas. Gas is required for reinjection, compression fuel, and power generation to support facilities at producing fields. This is likely to continue in the short term, given the slow pace of switching industrial use from petroleum. The government's focus in the 1990s on exploiting natural gas reserves and increasing output to meet rising demand complements its priority in maintaining current oil output levels. It seeks to do this without depleting crude reserves by using gas produced in association with oil output for reinjection at mature fields to increase production and, by substituting gas for oil, to release greater volumes of crude oil for export.

On February 8, 1992, the Ministry of Petroleum and Minerals signed a cooperation protocol with Royal Dutch Shell for a comprehensive evaluation of Oman's gas reserves, estimated in June 1992 at 482 billion cubic meters, the bulk of which is in nonassociated form. According to the minister of petroleum and minerals, some studies indicate a reserve base as high as 935 million cubic meters. A preliminary feasibility study conducted by Royal Dutch Shell indicated the potential for exploiting gas reserves at a rate of 142,000 cubic meters per year as exports over a twenty-year period and for meeting domestic demand for the next fifty years.

Most of the gas produced is in associated form and comes from PDO's Jibal field; smaller volumes come from the Natih and Sayh Nuhaydah fields in northern Oman and the Birba field in the south. Gas plants have been constructed in Jibal, Fuhud, Sayh Nuhaydah, Sayyala, and Rima, providing Oman with a gas-processing capacity of almost 18 million cubic meters per day. Despite increased gas production, gas throughput at these plants ran at about one-half of total capacity in 1989.

Evaluation of the commercial viability of the northern offshore Bukha natural gas and condensate field, discovered in 1986 by its concession operator, the International Petroleum Company of Canada, was completed in June 1992. The company estimates the life expectancy of the Bukha field at fifteen years, a capacity of 28 million cubic meters per day of gas and 5,000 to 10,000 bpd of condensate, and a requirement of an approximately US$60 million capital investment to bring the field onstream. Production was scheduled to begin in 1993.

The government planned to drill wells in the central fields (Sayh Rawl, Sayh Nuhaydah, Barik, and Mabruk) at a cost of RO47 million (US$18 million) between 1992 and 1995. Output from these structures will supply the US$9 billion LNG project, which was finalized on May 6, 1992, by a memorandum of understanding. In this project, the government will be responsible for all upstream (see Glossary) activities. A new consortium was established, comprising the Omani government at 51 percent, PDO's foreign shareholders (Royal Dutch Shell, Total-Compagnie Française des Pétroles, and Partex) at 42 percent, and three Japanese firms (Mitsubishi, Mitsui, and C. Itoh) at the remaining 7 percent, undertaking downstream operations under a service contract. Deliveries of LNG are not expected to begin before 1999. The Japanese market is expected to be the most probable destination for output.

If increasing volumes of gas are lifted, the government may consider new gas-based industries such as methanol, fertilizers, and methyl tertiary-butyl ester (MTBE). During 1992 talks were conducted with Iran concerning joint development of the Bukha and Henjam offshore fields, where limited drilling has indicated a gas and gas liquids potential. Omani officials have also conducted talks with Qatar regarding the purchase of natural gas from Qatar's North Field. The proposal to build a gas line from Qatar to Dubayy may be expanded to include a spur line to Oman. Minister of Petroleum and Minerals Shanfari indicated that Oman is prepared to purchase a volume up to 113 million cubic meters per day of gas from Qatar if an acceptable price can be negotiated. The regional gas line proposal was being considered among gulf countries for much of the 1980s. As of early 1993, a definitive decision on a regional (Arabian Peninsula) coordinated, long-term gas plan that would rationalize supply and demand for decades had not been completed.

Agriculture and Fishing

The government's economic development policy emphasizes the expansion of such non-oil sectors as agriculture, fishing, industry, and mining in its bid to diversify the economy and diminish its dependence on oil exports. The goal is to establish a sustainable economic base in preparation for the time when hydrocarbon reserves are depleted. The government launched several economic campaigns, naming 1988 and 1989 as Years of Agriculture and 1991 and 1992 as Years of Industry. Through these campaigns, the government has encouraged private-sector investment by allocating generous amounts of cash support for private industry to be disbursed mainly through official development banks. For example, the Oman Bank for Agriculture and Fisheries, created in 1981, extends loans at concessionary rates to individuals for whom farming or fishing is the principal activity. The bank acts as a distributive institution, receiving an interest subsidy from the government. In 1990 there were 1,308 loans, totaling RO4.7 million. Development programs also incorporate the government's policy of indigenization, with a large component of funds allocated for domestic technical training and academic training, often in the United States or in developing countries.

Agriculture

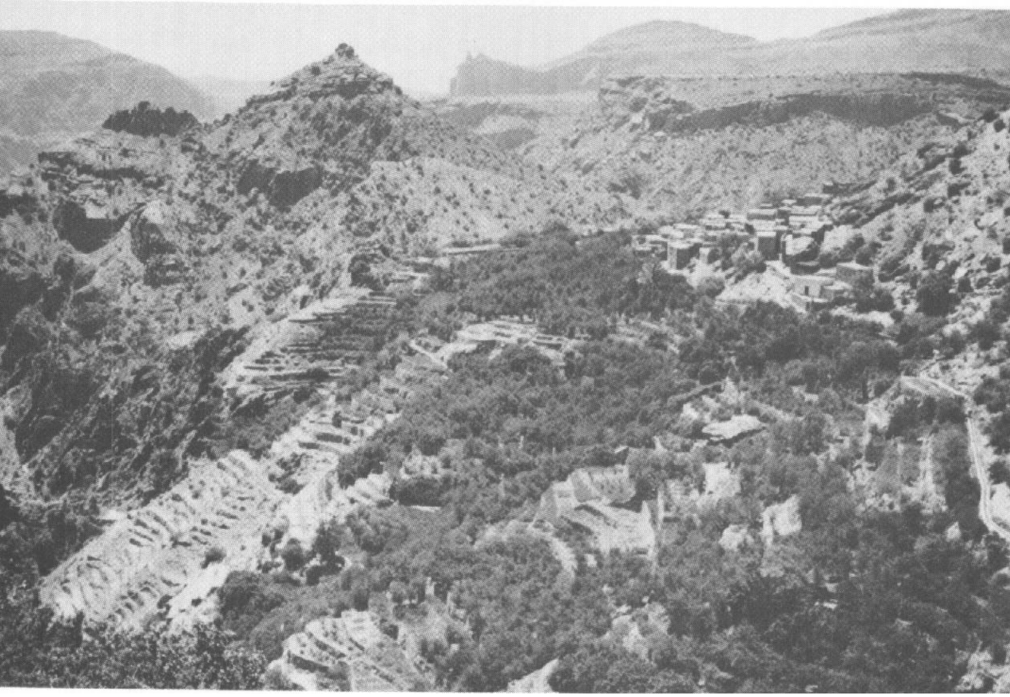
Oman has five distinct agricultural regions. Going roughly from north to south, they include the Musandam Peninsula, the Al Batinah coast, the valleys and the high plateau of the eastern region, the interior oases, and the Dhofar region, along the narrow coastal strip from the border with Yemen to Ras Naws and the mountains to the north.

In the early 1990s, interior farming areas accounted for more than one-half of the country's cultivated land. Rainfall, although greater in the interior than along the coast, is insufficient for growing crops. Most of the water for irrigation is obtained through the *falaj* system, in which a vertical shaft is dug from the surface to reach water in porous rock. From the bottom of this shaft, a gently sloping tunnel is dug to tap the water and allow it to flow to a point on the surface at a lower level or into a cistern or underground pool from which it can be lifted by bucket or pump.

A *falaj* may be many kilometers in length and require numerous additional vertical shafts to provide fresh air to the workers digging the tunnels and to permit the removal of the excavated rock and soil. A *falaj* requires tremendous expenditure of labor for maintenance as well as for construction. Because private maintenance efforts during the 1970s and early 1980s proved inadequate, the government initiated repair and maintenance of the *falaj* system to increase the quantity of water available to cultivated areas.

The cooler climate on the high plateau of the Al Jabal al Akhdar enables the growing of apricots, grapes, peaches, and walnuts. The Al Batinah coastal plain accounts for about two-fifths of the land area under cultivation and is the most concentrated farming area of the country. Annual rainfall along the coast is minimal, but moisture falling on the mountains percolates through permeable strata to the coastal strip, providing a source of underground water only about two meters below the surface. Diesel motors are used to pump water for irrigation from these shallow wells.

By the mid-1980s, the water table along the Al Batinah coast had dropped to a low level, and salinity of the wells had increased, significantly reducing the water quality. This was caused by the combined effect of cultivating land too close to the sea and pumping more well water than was being recharged by nature, thereby permitting seawater to encroach.



Falaj Alin at Al Jabal al Akhdar; the falaj *is an ancient underground channel used for irrigation in Oman.*
Al Jabal al Akhdar, showing terraced farming in one of Oman's main agricultural areas
Courtesy Embassy of the Sultanate of Oman, Washington

Overfarming and attendant water problems caused the government to establish the Ministry of Water Resources in 1990 with the mandate of limiting water consumption and improving irrigation. A freeze on new wells was imposed in addition to delimiting several "no drill zones" in areas where groundwater supplies are low. The ministry is also considering the installation of water meters. Recharge dams are designed to hold rainwater in the wadis for a period of time to facilitate the trickling of water down into the ground; replenishing aquifers have been built mainly in the northeastern Al Batinah region, where the groundwater levels are up to five meters below sea level.

Apart from water problems, the agricultural sector has been affected by rural-urban migration, in which the labor force has been attracted to the higher wages of industry and the government service sector, and by competition from highly subsidized gulf producers. As a result, agriculture and fishing have declined in relative sectoral importance. In 1967 the two sectors together contributed about 34 percent of GDP; by 1991 they accounted for 3.8 percent of GDP (see table 37, Appendix). The government encourages farming by distributing land, offering subsidized loans to purchase machinery, offering free feedstock, and giving advice on modern irrigation methods. As a result, the area under cultivation has increased, with an accompanying rise in production. But extensive agricultural activity has also depleted freshwater reserves and underground aquifers and has increased salinity.

The area under cultivation increased by almost 18 percent to 57,814 hectares over the period from 1985 to 1990. Fruits were grown on 64 percent, or 36,990 hectares, of the area under cultivation in crop year 1989–90. Dates accounted for 45 percent of the total area, or 70 percent of the area under fruit cultivation. Grains such as barley, wheat, and corn accounted for 19.2 percent, or 11,092 hectares, and vegetables accounted for 16.8 percent, or 9,732 hectares, of the total area under cultivation.

In the same five-year period, overall agricultural production increased by 3 percent to 699,000 tons. Field crops, largely alfalfa, accounted for more than one-half of total production, or 354,300 tons, a 40 percent increase in the five-year period. Fruit production (including dates and limes) was 182,400 tons, up from 154,500 tons. Vegetable production totaled 162,300 tons, an increase of almost 50 percent.