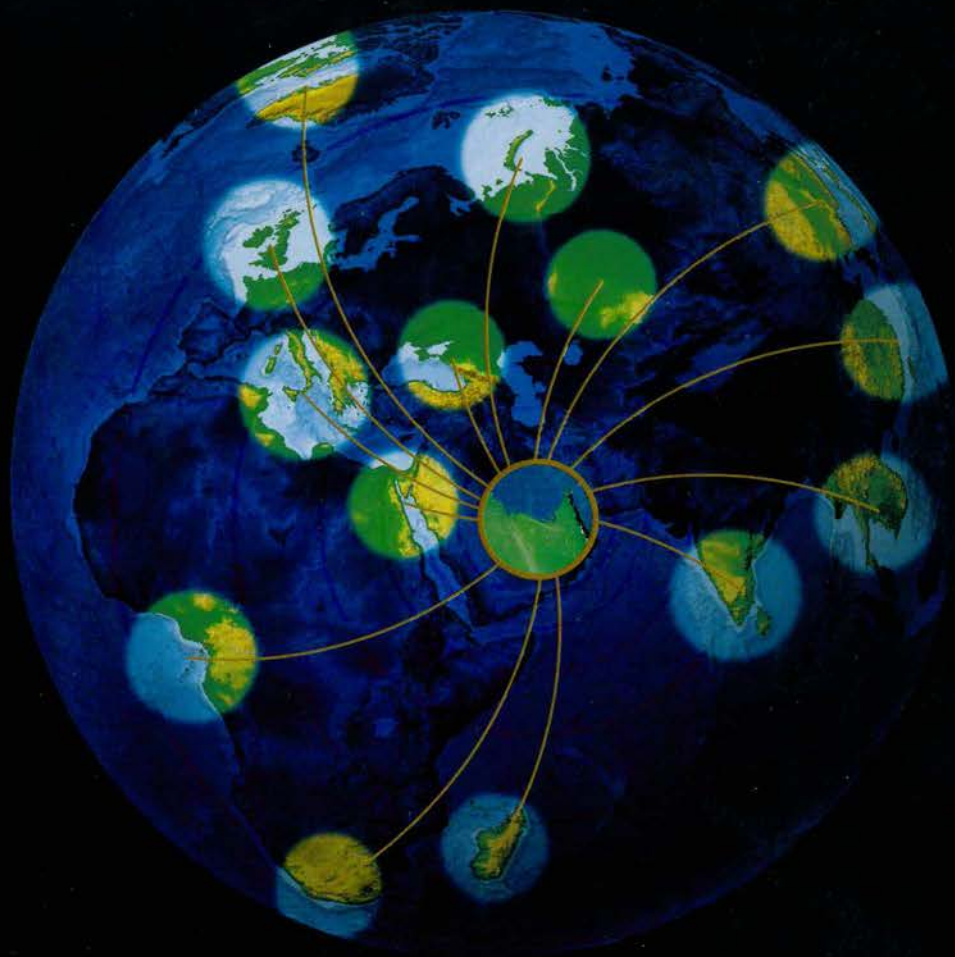


UNITED ARAB EMIRATES YEARBOOK 1998



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FOREWORD

The United Arab Emirates is at an exciting crossroads in its development. The 27 years since its establishment as a federation have been spent fostering unified and stable political structures capable of adapting to dramatic social change; building a diversified economy which is less dependent on fluctuating oil revenues; raising from the desert sands a comprehensive infrastructure of cities, houses, schools, hospitals, highways, and telecommunication facilities; successfully mounting a green revolution in terms of agriculture, tree-planting and general landscaping, as well as providing world-class education, health and social services to a burgeoning population. Leisure and sporting facilities have also developed apace, allowing the country's residents to enjoy their new-found prosperity to the full. At the same time, the UAE has been reaching out to the wider world, commercially through tourism and trade, and in the field of international relations by bringing deeply-held principles of justice, unity and tolerance to its dealings with the world community.

Although progress in the Emirates has been truly remarkable, the UAE has also been careful to preserve its treasured cultural and natural heritage. It is only through knowing and appreciating the cultural legacy of the past that a secure future can be forged. So too, is there a deep appreciation that the natural environment must be protected to hand on to our children.

During the past year growth and development have continued apace. This Yearbook aims to record these achievements, whilst putting them in context for those who are unfamiliar with the UAE's renaissance. We are justifiably proud of what we have accomplished and we hope that this book, whilst giving you an opportunity to share in our pride, will help you to appreciate the scale of our resurgence.

The challenge as the new millennium approaches will be to build on the country's unique strengths and continue the drive to achieve efficiency and quality, at the same time consolidating the impressive gains made in the few short years since the UAE's formation.

Abdullah bin Zayed Al Nahyan
Minister of Information and Culture



POLITICAL SYSTEM

Since its establishment in 1971 as a federation, the United Arab Emirates has forged a distinct national identity through consolidation of its federal status and now enjoys an enviable level of political stability. The UAE's political system, which is a unique combination of the traditional and the modern, has underpinned this remarkable political success, enabling the country to develop a modern administrative structure while, at the same time, ensuring that the best of the traditions of the past are maintained, adapted and preserved.

Establishment of the federation

The seven emirates were formerly known as the Trucial States, a name derived from a set of agreements between the rulers of the emirates and Great Britain, including the Perpetual Treaty of Maritime Truce, concluded in the 1850s and the Exclusive Agreement of 1892. These treaties allowed Britain to undertake responsibility for the emirates' foreign affairs, including external defence while, in turn, the British undertook not to intervene in the internal affairs of the emirates or in land-based relations between them.

During the period of British direct involvement in the region, and while protected from external threat, the traditional structures of governance that were in place at the beginning of the nineteenth century were gradually modified according to the changing conditions, and in accordance with the wishes of the rulers and people.

To some extent, indeed, the relationship of Britain with the emirates, apart from matters of foreign affairs and defence, can best be described as one of benign neglect. Until the mid-1950s, virtually no attention was paid by the British to the economic development of the country, and even then it was the rulers themselves who took the initiative towards creating a modern infrastructure.

Following the British announcement, in early 1968, that they would be terminating their agreements with the Trucial States by the end of 1971, the rulers of the seven emirates, Abu Dhabi, Dubai, Sharjah, Ras al-Khaimah, Fujairah, Umm al-Qaiwain and Ajman, met to discuss their future. Recognising that more united than divided them, they agreed to establish a federal state, in order to venture together upon a new and challenging future.

The following statement was released on 2 December 1971 as the new state was formally established:

The United Arab Emirates has been established as an independent state, possessing sovereignty. It is part of the greater Arab nation. Its aim is to maintain its independence, its sovereignty, its security and its stability, in defence against any attack on its entity or on the entity of any of its member Emirates. It also seeks to protect the freedoms and rights of its people and to achieve trustworthy co-operation between the Emirates for the common good. Among its aims, in addition to the purposes above described, is to work for the sake of the progress of the country in all fields, for the sake of providing a better life for its citizens, to give assistance and support to Arab causes and interests, and to support the charter of the United Nations and international morals.

In 1971 the country's population was a mere 180,000, in an area of 83,600 square kilometres and there were substantial differences between the individual emirates, in terms of size, population, economic resources and degree of development.

The larger emirates of Abu Dhabi and Dubai were already oil exporters, and the process of economic development was well under way. At the other end of the scale, Ajman, the smallest emirate, had an area of only 260 square kilometres, whilst the East Coast emirate of Fujairah, with only a few tens of thousands of inhabitants, was not even connected by a proper road through the mountains to the rest of the country.



Sheikh Zayed and Sheikh Rashid.

Federal Constitution

Each of the component emirates of the federation, officially entitled *Dawlat al Imarat al Arabiyya al Muttabida* (State of the United Arab Emirates), had its own existing institutions of government and, to provide for the effective governing of the new state, the rulers agreed to draw up a provisional constitution specifying those powers which were to be allocated to new federal institutions, all others remaining the prerogative of the individual emirates.

Assigned to the federal authorities, under Articles 120 and 121 of the Constitution, were the areas of responsibility for foreign affairs, security and defence, nationality and immigration issues, education, public health, currency, postal, telephone and other communications services, air traffic control and licensing of aircraft, as well as a number of other topics specifically prescribed, including labour relations, banking, delimitation of territorial waters and extradition of criminals.

In parallel, the Constitution also stated in Article 116 that: 'the Emirates shall exercise all powers not assigned to the federation by this Constitution'. This was reaffirmed in Article 122, which stated that 'the Emirates shall have jurisdiction in all matters not assigned to the exclusive jurisdiction of the federation, in accordance with the provision of the preceding two Articles'.

The new federal system of government included a Supreme Council, a Cabinet, or Council of Ministers, a parliamentary body, the Federal National Council, and an independent judiciary, at the peak of which is the Federal Supreme Court.

Supreme Council of the Federation

In a spirit of consensus and collaboration, the rulers of the seven emirates agreed during the process of federation that each of them would be a member of a Supreme Council, the top policy-making body in the new state. They agreed also that they would elect a president and a vice president from amongst their number, to serve for a five year term of office. The Ruler of Abu Dhabi, Sheikh Zayed bin Sultan Al Nahyan, was elected as the first President, a post to which he has been re-elected at successive five yearly intervals, while the Ruler of Dubai, Sheikh Rashid bin Saeed Al Maktoum, was elected as first Vice President, a post he continued to hold until his death in 1990, at which point his eldest son and heir, Sheikh Maktoum bin Rashid Al Maktoum, was elected to succeed him.

The current members of the Supreme Council are:

President HH Sheikh Zayed bin Sultan Al Nahyan, Ruler of Abu Dhabi

Vice President and Prime Minister HH Sheikh Maktoum bin Rashid Al Maktoum, Ruler of Dubai

HH Dr Sheikh Sultan bin Mohammed Al Qassimi, Ruler of Sharjah

HH Sheikh Saqr bin Mohammed Al Qassimi, Ruler of Ras al-Khaimah

HH Sheikh Rashid bin Ahmed Al Mu'alla, Ruler of Umm al-Qaiwain

HH Sheikh Humaid bin Rashid Al Nuaimi, Ruler of Ajman

HH Sheikh Hamad bin Mohammed Al Sharqi, Ruler of Fujairah



First hoisting of the flag of the United Arab Emirates, 2 December 1971.

Crown Princes and Deputy of the Rulers:

HH Sheikh Khalifa bin Zayed Al Nahyan, Crown Prince of Abu Dhabi and Deputy Supreme Commander of the UAE Armed Forces, Chairman of the Executive Council of the Emirate of Abu Dhabi

HE Sheikh Hamdan bin Rashid Al Maktoum, Deputy Ruler of Dubai, Minister of Finance and Industry

General HE Sheikh Mohammed bin Rashid Al Maktoum, Crown Prince of Dubai and Minister of Defence

HE Sheikh Khalid bin Saqr Al Qassimi, Crown Prince and Deputy Ruler of Ras al-Khaimah

HE Sheikh Saud bin Rashid Al Mu'alla, Crown Prince of Umm al-Qaiwain

HE Sheikh Ammar bin Humaid Al Nuaimi, Crown Prince of Ajman



First meeting of the Federal Supreme Council after Ras-al Khaimah joined in 1972.

HE Sheikh Ahmed bin Sultan Al Qassimi, Deputy Ruler of Sharjah

HE Sheikh Sultan bin Mohammed Al Qassimi, Deputy Ruler of Sharjah

HE Sheikh Hamad bin Saif Al Sharqi, Deputy Ruler of Fujairah

HE Sheikh Sultan bin Saqr Al Qassimi, Deputy Ruler of Ras al-Khaimah

The Federal Supreme Council is vested with legislative as well as executive powers. It ratifies federal laws and decrees, plans general policy, approves the nomination of the Prime Minister and accepts his resignation. The Supreme Council also elects the President and his Deputy for five year terms. Both may be re-elected.

At a historic meeting on 20 May 1996 the Federal Supreme Council approved a draft amendment to the country's provisional Constitution, making it the permanent Constitution of the UAE. The amendment named Abu Dhabi as the capital of the state.



Abu Dhabi, capital of the UAE.

The Council of Ministers

The Council of Ministers or Cabinet, described in the Constitution as 'the executive authority' for the federation, includes the usual complement of ministerial portfolios, and is headed by a Prime Minister, chosen by the President in consultation with his colleagues on the Supreme Council. The Prime Minister, currently the Vice President, although this has not always been the case, then selects the Ministers, who may be drawn from any of the federation's component emirates, although, naturally, the more populous emirates have generally provided more members of each Cabinet.

The current 21 member Cabinet, comprising 17 ministers and four ministers of state, was appointed on 25 March 1997 under the terms of Decree No. 67 of 1997 and according to the proposal of Vice President HH Sheikh Maktoum bin Rashid Al Maktoum, who was requested by the President to form a new government.

The full Cabinet listing is as follows:

Prime Minister: Vice President HH Sheikh Maktoum bin Rashid Al Maktoum

Deputy Prime Minister: Sheikh Sultan bin Zayed Al Nahyan

Minister of Finance and Industry: Sheikh Hamdan bin Rashid Al Maktoum

Minister of Defence: Gen. Sheikh Mohammed bin Rashid Al Maktoum

Minister of State for Foreign Affairs: Sheikh Hamdan bin Zayed Al Nahyan

Minister of Information and Culture: Sheikh Abdullah bin Zayed Al Nahyan

Minister of Planning: Sheikh Humaid bin Ahmed Al Mu'alla

Minister of Higher Education and Scientific Research: Sheikh Nahyan bin Mubarak Al Nahyan

Minister of Economy and Commerce: Sheikh Fahim bin Sultan Al Qassimi

Minister of State for Supreme Council Affairs: Sheikh Majed bin Saeed Al Nuaimi

Foreign Minister: Rashid Abdullah Al Nuaimi

Minister of Interior: Lt Gen. Dr Mohammed Saeed Al Badi

Minister of Health: Hamad Abdul Rahman Al Madfa

Minister of Electricity and Water: Humaid bin Nasir Al Owais

Minister of State for Cabinet Affairs: Saeed Khalfan Al Ghaith

Minister of Agriculture and Fisheries: Saeed Mohammed Al Ragabani

Minister of Communications: Ahmed Humaid Al Tayer

Minister of Public Works and Housing: Rakad bin Salem Al Rakad

Minister of Petroleum and Mineral Resources: Obeid bin Saif Al Nassiri

Minister of Education and Youth: Dr Abdul Aziz Al Sharhan

Minister of Justice, Islamic Affairs and Awqaf: Mohammed Nukhaira Al Dhahiri

Minister of Labour and Social Affairs: Mattar Humaid Al Tayer

Minister of State for Financial and Industrial Affairs: Dr Mohammed Khalfan bin Kharbash.

The Director General of the President's Office, Sheikh Mansour bin Zayed Al Nahyan, also has ministerial status.



The current Council of Ministers.

Federal National Council

The Federal National Council (FNC) has 40 members drawn from the emirates on the basis of their population, with eight for each of Abu Dhabi and Dubai, six each for Sharjah and Ras al-Khaimah, and four each for Fujairah, Umm al-Qaiwain and Ajman. Presided over by a Speaker, or either of two Deputy Speakers, elected from amongst their number, the FNC is responsible under the Constitution for examining, and, if it wishes, amending, all proposed federal legislation, and is empowered to summon and to question any Federal Minister regarding Ministry performance. One of the main duties of the FNC is to discuss the annual budget. Specialised sub-committees and a Research and Studies Unit have been formed to assist FNC members to cope with the increasing demands of modern government.

Sheikh Zayed inaugurated the first regular meeting of the eleventh Legislative Session of the Federal National Council on 14 December 1997 with the following words:

Brother members of the FNC, we welcome you to the new term of your respected Council, which represents the continued process of consultation between the members of our one family. We view this Council with pride and respect, because it has contributed nobly and with great effort throughout the years of its existence in implanting and enriching the principles of consultation and participation which we derive from the spirit of our Islamic sharia and our indigenous Arab heritage. It is always a matter of pleasure and pride for us to see the contributions that this Council makes in translating into practice those things which we have wished to see in terms of our objectives and aspirations, the essential core of which is our desire to care for the human being and his interests and to provide a decent and secure life for the sons and daughters of this nation, and to push forward with the process of development and construction in our young country. We believe firmly that this blessed federation, which we established 26 years ago, cannot be cherished, and its achievements cannot be protected, except through the efforts of its sons and daughters and by their effective participation, as well as their shouldering of the full responsibilities placed upon them.

New economic, social and cultural issues have emerged, the full implications of their impact on our society as yet being unclear. We look therefore for a re-doubling of the efforts of your respected Council in the future, so that these new topics may be dealt with, and so that you may put forward the suitable ways and means that may be necessary to protect and foster the federal march, in such a way as serves the state and its citizens, and provide a decent life for all members of our dear people.

While we celebrate the twenty-sixth anniversary of our federation, we can see around us the great achievements of the federation, a credit to our sons, wherever they may be. The turning wheel of our development has not ceased to revolve since 2-December 1971. Everything bears witness to the scale of our achievements in various social, economic, educational, cultural, health and other fields over such a short period in the life of man.

... We look forward to seeing in the future our sons and daughters playing a more active role, broadening their participation in the process of development and shouldering their share of the responsibilities, especially in the private sector, so as to lay the foundations for the success of this participation, and its effectiveness. At the same time, we are greatly concerned to raise the standing and dignity of the work ethic in our society, and to increase the percentage of citizens in the labour force. This can be achieved by following a realistic and well-planned approach that will improve performance and productivity, moving towards the long term goal of secure and comprehensive development. There is no doubt in our mind that you, members of this respected Council, share a joint responsibility with the executive branch of Government in achieving this important national goal.

The current Speaker of the FNC is Mohammed bin Khalifa Al Habtour who defeated former Speaker Al Haj Abdulla Al Muheirbi in an election on 15 December 1997. Al Habtour is the FNC's fifth Speaker. The late Thani bin Abdulla was Speaker during the first and second legislative chapters between 12 February 1972 and 1 February 1976.

On his election, the Speaker welcomed Sheikh Zayed's support for the FNC, which would enable it to consolidate the principle of *shura* (consultation), as ordained by Islam. He pledged that the Council would work sincerely to implement the points made by Sheikh Zayed in his inaugural speech to the new FNC session. He also said that the Council would fully co-operate with the government to provide citizens with the best possible services in all fields, so as to meet the aspirations and needs of the UAE people.

The FNC is a member of the International Parliamentary Union (IPU), as well as the Arab Parliamentary Union (APU) and participates actively in these bodies. The FNC's Second Deputy Speaker, Obaid bin Isa Ahmed, addressed the ninety-ninth session of the IPU in April 1998, whilst Sultan Ahmed Hareb headed the FNC delegation to the APU's eighth meeting, held in Mauritania in June. An FNC delegation led by member Obeid Ali al Muhairi also participated in the annual Arab-European Parliamentary Dialogue in Damascus in July. Speaker Mohammed bin Khalifa Al Habtour led the Council's delegation to the hundredth IPU conference in September.



Sheik Zayed with Sheikh Maktoum.

Federal judiciary

The federal judiciary, whose independence is guaranteed under the Constitution, includes the Federal Supreme Court and Courts of First Instance. The Federal Supreme Court consists of five judges appointed by the Supreme Council of Rulers. The judges decide on the constitutionality of federal laws and arbitrate on intra-emirate disputes and disputes between the federal government and the emirates.

Local government

Parallel to, and, on occasion, interlocking with, the federal institutions, each of the seven emirates also has its own local government. Although all have expanded significantly as a result of the country's growth over the last 27 years, these differ in size and complexity from emirate to emirate, depending on a variety of factors such as population, area, and degree of development.

Thus the largest and most populous emirate, Abu Dhabi, has its own central governing organ, the Executive Council, chaired by the Crown Prince, Sheikh Khalifa bin Zayed Al Nahyan, and is divided into two regions, the Eastern and Western, both headed by an official with the title of Ruler's Representative. There is also a Ruler's Representative on the important oil terminal island of Das.

The main cities, Abu Dhabi and Al Ain, the latter also the capital of the Eastern Region, are administered by municipalities, each of which has a nominated Municipal Council, while the National Consultative Council, chaired by a Speaker, and with 60 members drawn from among the emirate's main tribes and families, undertakes a role similar to that of the FNC on a country-wide level, questioning officials and examining and endorsing local legislation. It is also a source of vocal suggestion for the introduction or revision of federal legislation.

Administration in the emirate is implemented by a number of local departments, covering topics such as public works, water and electricity, finance, customs, and management. Some have a responsibility for the whole of the emirate, although in certain spheres, such as water and electricity, there are also departments covering only the Eastern Region.

A similar pattern of municipalities and departments can be found in each of the other emirates, while Sharjah, with its three enclaves on the country's East Coast, has also adopted the practice of devolving some authority on a local basis, with branches, headed by deputy chairmen, in both Kalba and Khor Fakkan of the Sharjah Emiri Diwan (Court).

In smaller or remoter settlements, the ruler and government of each emirate may choose a local representative, an emir or wali, to act as a conduit through which the concerns of inhabitants may be directed to government. In most cases, these are the leading local tribal figures, whose influence and authority derives both from their fellow tribesmen



Sheikh Zayed meets the people of Liwa.

and from the confidence placed in them by the ruler, an example of the way in which local leaders within the traditional system have become involved with, and lend legitimacy to, the new structures of government.

Relationship between federal and local government

The powers of the various federal institutions and their relationship with the separate institutions in each emirate, laid down in the Constitution, have evolved and changed since the establishment of the state. Under the terms of the Constitution, rulers may, if they wish, relinquish certain areas of authority, prescribed as being the responsibility of individual emirates, to the federal government, one significant such decision being that to unify the armed forces in the mid-1970s. The 1971 Constitution also permitted each emirate to retain, or to take up, membership in the Organisation of Petroleum Exporting Countries (OPEC) and the Organisation of Arab Petroleum Exporting Countries (OAPEC), although none have done so; the only emirate to be a member in 1971, Abu Dhabi, having chosen to relinquish its memberships in favour of the federation.



Sheikh Zayed and members of the Supreme Council at an FNC meeting.

Over the course of the 27 years since the federation was established, the United Arab Emirates has grown dramatically as a result of a sustained development programme, which has not only seen the completion of a modern infrastructure that reaches into the remotest mountain villages, but has also seen population rise more than ten fold to an estimated 2.8 million at the end of 1998.

With such a pace of growth, the organs of government, both federal and local, have also developed impressively, and their influence now affect almost all aspects of life, for both UAE citizens and expatriates. As with other relatively young states, new institutions that were created for the first time have derived their legitimacy and status from the extent of their activities and achievements, and from acknowledgement and appreciation of their role by the people.

The relationship between the new systems of government, federal and local, has itself evolved in a constructive manner. As the smaller emirates have benefited from development in terms of, for example, education, so they have been able to find the personnel to extend the variety of services provided by their own local governments which had once been handled on their behalf by federal institutions, such as tourism. At the same time, in other areas, such as the judiciary, there has been an evolving trend towards a further voluntary relinquishment of local authority to the federal institutions. These new systems of government have not, however, replaced the traditional forms which coexist and evolve alongside them.

Traditional government ✓

Traditionally, the ruler of an emirate, the sheikh, was the leader of the most powerful, though not necessarily the most populous, tribe, while each individual tribe, and often its various sub-sections, also generally had a chief or sheikh. Such rulers and chiefs maintained their authority only insofar as they were able to retain the loyalty and support of their people, in essence a form of direct democracy, though without the paraphernalia of western forms of suffrage. Part of that democracy was the unwritten but strong principle that the people should have free access to their sheikh, and that he should hold a frequent and open majlis, or council, in which his fellow tribesmen could voice their opinions.

Such a direct democracy, of course, may be ideally suited to small and relatively uncomplicated societies, but becomes steadily more difficult to maintain as populations grow, while the increasing sophistication of the elements of government, through the various federal ministries and local departments and municipalities, means that on a day to day basis many of the inhabitants of the emirates now find it more appropriate to deal directly with these institutions on most matters, rather than to seek to meet directly with their ruler or sheikh.

One fascinating aspect of life in the UAE today, and one that is essential to an understanding of its political system, is the way in which the institution of the majlis has continued to maintain its relevance. In larger emirates, not only the ruler, but also a number of other senior members of his family, continue to hold open majlises, in which participants may raise a wide range of topics, from a request for a piece of land, or for a scholarship for a son or daughter to go abroad, to more weighty subjects such as the impact of large-scale foreign immigration upon society or complaints about perceived flaws in the practices of various ministries and departments.

In smaller emirates, the majlis of the ruler himself, or of the crown prince or deputy ruler, remain the main focus. In Fujairah, for example, the Ruler holds an open majlis at least once a week (daily during the Muslim holy fasting month of Ramadan), which may be attended by both citizens and expatriates. To these majlises come traditionally-minded tribesmen who may have waited several months for the opportunity to discuss with their ruler directly, rather than choose to pursue their requests or complaints through a modern governmental structure.

In modern society, of course, as President Sheikh Zayed himself has commented, it is naturally easier for a ruler to go to meet his people than for them to come to meet him. Sheikh Zayed frequently travels within the UAE, providing opportunities for him to meet with citizens away from the formal surroundings of an office or palace. During his regular inspection tours of projects, he also takes pains to ensure that citizens living nearby are guaranteed easy access to him.

Over the years since the United Arab Emirates was formed, the attitude of its people towards the modern and the traditional forms of government have, naturally, evolved. The ministries, departments and municipalities are now well established, and deal with a broad range of activities. As their functions have expanded, so they have taken over responsibility for a number of tasks with which, traditionally, a ruler would have dealt



Sheikh Zayed and members of the Supreme Council at an FNC meeting.

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In smaller emirates, the majlis of the ruler himself, or of the crown prince or deputy ruler, remain the main focus. In Fujairah, for example, the Ruler holds an open majlis at least once a week (daily during the Muslim holy fasting month of Ramadan), which may be attended by both citizens and expatriates. To these majlises come traditionally-minded tribesmen who may have waited several months for the opportunity to discuss with their ruler directly, rather than choose to pursue their requests or complaints through a modern governmental structure.

In modern society, of course, as President Sheikh Zayed himself has commented, it is naturally easier for a ruler to go to meet his people than for them to come to meet him. Sheikh Zayed frequently travels within the UAE, providing opportunities for him to meet with citizens away from the formal surroundings of an office or palace. During his regular inspection tours of projects, he also takes pains to ensure that citizens living nearby are guaranteed easy access to him.

Over the years since the United Arab Emirates was formed, the attitude of its people towards the modern and the traditional forms of government have, naturally, evolved. The ministries, departments and municipalities are now well established, and deal with a broad range of activities. As their functions have expanded, so they have taken over responsibility for a number of tasks with which, traditionally, a ruler would have dealt

on a personal basis. Moreover, for the younger generation, who have grown up under the umbrella of such institutions, there is now a growing tendency to pay less attention to the old forms of governance, even though they may frequently attend majlis, particularly of the younger sheikhs. Among the older generation, however, traditional ways have retained their popularity, even if, on occasion, approaches may be made through the government machinery.

Just as the modern institutions have developed in response to public need and demand, however, so the traditional forms of tribal administration have adapted. With many relatively routine matters now being dealt with by the modern institutions, so the traditional ones, like the majlis, have been able to focus on more complex issues rather than on the routine matters with which they were once heavily involved.

In the majlis, for example, it is possible to hear detailed, and often heated, discussions between sheikhs and other citizens on questions such as the policy that should be adopted towards the evolution of the machinery of government, or the nature of relations with neighbouring countries. On matters more directly affecting the individual, such as the topic of unemployment among young UAE graduates, debates often tend to begin in the majlis, where discussion can be fast and furious, before a consensus approach is evolved that is subsequently reflected in changes in government policy.

Through such means, the traditional methods of government in the UAE have been able to retain both their relevance and vitality, and they continue to play an important, although often unpublicised, role in the evolution of the state today.

A balanced approach

In many relatively new countries, government leaders have chosen to adopt uncritically forms of political administration that have been developed in, and for, other countries with different social and economic conditions. As a corollary, they have neglected, and have often formally abolished, the traditional forms of government which once prevailed. The result, as has become sadly clear over the course of the last 20 or 30 years, has been that often governments have become divorced from their people, with a consequent failure to obtain, or to retain, popular legitimacy.

In the UAE, however, a different approach has been adopted: that of creating modern forms of administration, but, at the same time, of preserving traditional institutions, with the vitality and legitimacy they draw from history.

When the rulers of the emirates met 27 years ago to agree on the forms of government for their new federal state, they chose deliberately not simply to copy from others. They chose, instead, to work towards a society that would offer the best of modern administration, while at the same time retaining the traditional forms of government, that, with their inherent commitment to consensus, discussion and direct democracy, offered the best features of the past.

With the benefit of hindsight, it is evident that they made the correct choice, for, despite the massive economic growth and the social dislocation caused by an explosion in the population, the state has enjoyed an enviable stability. During the course of the last few decades, moreover, there have been numerous attempts to create federal states, both in the Arab world and elsewhere, but the UAE is the only one in the Arab world to have stood the test of time.

Perhaps one reason for the success of the federal experiment in the UAE has been the fact that its leaders and people have avoided the temptation to adopt a rigid political ideology that owes its origins to other countries and other societies, preferring instead to hold fast to the essential principles on which local society has been governed for centuries.

Whatever the cause, however, the result has been the evolution of a society where modern and traditional forms of government are not only both relevant but are also evolving harmoniously alongside each other, in pursuit of the greater goal of a stable, prosperous, confident and democratic society.

Sheikh Khalifa chairs a meeting of the Abu Dhabi Executive Council.



INTERNATIONAL RELATIONS

During the course of the past year, the United Arab Emirates has continued the process that began with its establishment 27 years ago of steadily but quietly working in co-operation with its friends to achieve a better world.

The basic guidelines of foreign policy, still followed today, first began clearly to emerge in the mid-1960s, when Sheikh Zayed bin Sultan Al Nahyan became the Ruler of the largest emirate, Abu Dhabi, not long after its commencement of oil exports gave it both the need to extend its international ties and also the economic weight to play a regional and then an international role.

Those guidelines, like those of many other small states in the community of nations, are based upon the principles enunciated in the Charter of the United Nations, notably those of non-interference in the internal affairs of others, respect for the sovereignty and territorial integrity of nations, as well as inadmissibility of the acquisition of territory by force.

Some of the basic foci of policy have been constant through the years. In particular, from the earliest days of the state, the UAE has upheld a desire for close relations with its neighbours and Arab sister states, with particular emphasis on those in the Arabian peninsula.

Thus the Gulf Co-operation Council (GCC), formally established at a summit meeting in Abu Dhabi in 1981, is a central component of UAE foreign policy, especially its continuous efforts to encourage regional stability. 'We in the Arabian Gulf are one family', according to Sheikh Zayed who, in a speech to the eighteenth GCC summit, noted that the GCC was capable of achieving the aspirations of its people in all fields, stressing the UAE's belief in GCC unity as the means to secure the widest possible co-operation.

Within the broader framework of the quest for Arab solidarity, Sheikh Zayed remarked: 'The GCC's weight and position in the Arab and Muslim nation requires further efforts from the Council to support current drives which seek to serve the nation's causes, unifying its ranks and patching up its differences'.

Reconciliation, tolerance and solidarity within the Arab world are a constant theme of Sheikh Zayed's speeches. He has directed his personal efforts and UAE resources towards the goal of harmony and entente between Arabs and has constantly urged dialogue to eradicate differences. Participation in and support for the Arab League has been a central feature of these efforts.

Based on the guiding principles of faithfulness to the UN Charter and the Charter of the Organisation of the Islamic Conference (OIC), unity of Arab purpose as well as peaceful co-existence, the UAE has continued over the past year to play a positive role as a significant influence for rapprochement and peace, as a firm voice for justice and human rights, and as a generous aid donor.



Three islands issue

In the period under review, the UAE has consistently reaffirmed its sovereignty over the islands of Abu Musa and the Greater and Lesser Tunbs, at the same time repeatedly reiterating its desire to reach a peaceful solution to the issue of Iranian occupation of these islands. Iran seized the islands by force in November 1971 and has remained in occupation since that date. It has at all times endeavoured to alter the historic, legal, cultural and demographic character of the islands, with the aim of imposing a fait accompli by force. These illegal actions have taken place in the face of persistent protests by the UAE at the flagrant violation of its sovereignty and territorial integrity, and continuous calls from the UAE for bilateral talks. Iranian activities on the islands have focused on the erection of civilian and military installations, including the opening of a university on Abu Musa and the construction of a quay on Greater Tunb. One of the more recent provocative acts was the naming of Iranian military ships after Abu Musa and Tunb.

Iran's continued military control of the three islands has remained a major thorn in the side of neighbourly relations between the two countries, and between Iran and GCC countries in general, and has threatened long term stability in the region. While the UAE has made every effort to solve the dispute by peaceful means, Iran has not only balked at such proposals but has actually built up a military presence on the island and shown little inclination to listen to UAE protests concerning its actions. In the absence of dialogue, the UAE has suggested that the territorial dispute be referred to the International Court of Justice (ICJ) at The Hague.

Defence Minister General Sheikh Mohammed bin Rashid Al Maktoum has recently reaffirmed the firm position adopted by the UAE on sovereignty over the three islands, saying: 'We demand the recovery of the Arab islands and our demand is clear: either



Sheikh Zayed with President Mubarak of Egypt.



Sheikh Zayed with Omar Bongo, President of Gabon.



Sheikh Zayed with the Secretary General of the Arab League.

The UAE rejected such acts, describing them as provocative to Palestinians, Arabs and Muslims, and stated that the decision is a clear violation of international law, international legitimacy, the main principles of the peace operation and the letter and spirit of the Fourth Geneva Convention. The statement said that the decision, which coincided with the call by Israeli Prime Minister Benjamin Netanyahu to hold a new peace conference in Madrid, clearly reflects the hostile intentions of the Israeli government and violates all its commitments in the peace agreements which it has signed.

The statement warned that the decision will have dangerous consequences and lead to further suffering for Palestinians, as well as an increase in violence and tension in the area, threatening regional and international security. The UAE, by condemning all Israeli violations, renewed its support for the Palestinian people's rejection of all forms of Israeli occupation, especially in Jerusalem. The UAE also condemned repeated obstacles set by the Israeli government to the resumption of peace negotiations and called on the Security Council to denounce Israeli violations and to adopt a firm stance to force the Israeli government to abandon its occupation.

Economic aid

Sheikh Zayed's support for the Palestinian cause is not confined to the political arena. One of his many areas of assistance on the economic front has been a proposal to establish Zayed City in Gaza, designed to provide housing units and other basic services to the Palestinians in the area. The 3,600-apartment project, to be built on an area of 400 donums at a total cost of \$160 million, will include all necessary services, schools, hospitals, sports facilities, police and civil defence centres, as well as advanced infrastructure. The project will also contribute to solving unemployment arising from Israeli policies and will help to counter Israel's expansionist practices.

Arab unity

Sheikh Zayed's speech to a high-level, three-day symposium on the future of the Arab world and the role of the Arab League, held in Abu Dhabi in November 1997, began with a call for unity. He stressed that division was a source of strength for the enemies of Arab countries and that the time was right for a harmonious, balanced and sensible look into the future of the Arab world. The present age, he said, requires that Arab states work together to meet political, economic, cultural and technical challenges. Sheikh Zayed also highlighted a number of important issues with related international and regional dimensions which needed to be addressed within the Arab world; these included environmental protection, limiting weapons of mass destruction, prevention of terrorism, and strengthening the UN role to safeguard international peace and stability.

In June 1998, Sheikh Zayed expressed the opinion that an Arab summit should be held regularly every year in order to promote cohesion and solidarity. He stressed that everything needed regular maintenance, whether it was a vehicle, a house or a ship, as all things were prone to wear and tear:

The Arab world comprises 22 countries which need annual maintenance. Our meetings should not be held only when the need arises or in the case of emergency in order to safeguard our nation and its future. If the Arab house is well protected and is in order, no enemy can have the courage to exploit the divisions and differences between us. Though we co-operate with and share interests with foreign powers, who support us today, we do not know for how long such support will last. Therefore, it is incumbent on Arab brothers to get closer and more united and support each other.

Iraq

The UAE has consistently expressed its sympathy for the suffering of the Iraqi people and the deprivations that they are suffering as a result of sanctions, at the same time calling upon Iraq to abide fully by all UN Security Council resolutions passed following Iraq's invasion of Kuwait.

Preservation of the independence, sovereignty and territorial integrity of Iraq is a cornerstone of UAE policy and is fundamental to the maintenance of security and stability in the region. The UAE was perturbed, therefore, by escalating crises over the past year between the UN and Iraq, arising from UNSCOM efforts to perform its weapons inspection duties without restrictions. It joined with other members of the Arab League in rejecting military confrontation, advocating a peaceful diplomatic solution at all times and stressed that the best way to avert a military strike, which would result in increased hardship for the Iraqi people, was through Baghdad's full compliance with the relevant UN Security Council resolutions. Sheikh Zayed has said that Iraqi compliance 'will, in turn, improve the possibility of the lifting of the sanctions imposed upon Iraq, the continuation of which will exacerbate the tragedies currently being suffered by the Iraqi people.' Sheikh Zayed pointed out that a resort to military action would have repercussions on the stability and security of the Arabian Gulf and the Middle East region in general and went on to say that:

Such (military) action would be a retrograde step for the region, and is not in the interests of any party. It would also have an adverse effect upon current and future relations between East and West, and would destroy the many positive achievements of trust and co-operation that have been built up over the past few years. Nobody can prophesy the extent to which the fire will spread if, God forbid, it is permitted to start.

The Arab Gulf region and the Arab world in general would also be directly harmed, because such an action would inevitably reflect in a negative manner upon a variety of Arab issues, such as the future of the Palestine question and the floundering Middle East peace process, especially because of the failure of efforts by the United States to move the peace process forward to its desired conclusion, quite apart from the impact on the future for peace and security in the Arab Gulf region.

The leadership of Iraq must do everything possible to remove any justification for war and the destruction that would inevitably result. Out of the concept of Arab and Islamic brotherhood, we appeal to the leadership of Iraq to listen to the voice of reason.

The UAE were particularly appreciative of UN Secretary General Kofi Annan's successful efforts at negotiation between Iraq and the UN and welcomed the passage of Security Council Resolution 1154 which obliges Iraq to abide by the agreement it signed with the UN, describing it as a decisive expression of international will. It also welcomed the UN's approval for an increase in Iraq's oil-for-food, six-monthly revenues from \$2 billion to \$5.2 billion, at the same time reiterating the importance of Iraq's unconditional compliance with all Security Council resolutions, particularly those dealing with the elimination of weapons of mass destruction and the release of Kuwaiti prisoners.

The UAE has stressed at all times that the Arab world would not easily accept the adoption by the international community of double standards towards Iraq in the effort to oblige Baghdad to implement UN Security Council resolutions. Iraq should unquestionably implement all UN resolutions and at the same time, the international community should forcefully request Israel that it, too, should comply with UN resolutions.

'We deal with the question of international legitimacy as an indivisible whole,' the UAE has said. 'Iraq has agreed to implement international resolutions and it is obliged to abide by its commitments. In the same way, Israel is also obliged to comply with the resolutions of the international community and to abide by the agreements it signed in Oslo, Cairo and Washington, in accordance with the principles of international law and legitimacy.'

The UAE has also asked the international community to recognise that their actions are first and foremost affecting the Iraqi people and not the Iraqi leadership. Sheikh Zayed has pointed out that:

Moderate states in the Arab world recognise that Saddam did injustice and received a response. He paid the price and sanctions have now been imposed on Iraq for seven years. Now, Iraq is sick, tired, hungry and naked. How can you continue to impose sanctions on it for ever in a situation like this? It should not continue to be punished and should no longer be under sanctions. For how long is this going to continue? We believe that the time has come to say enough is enough.

In the context of humanitarian aid, the UN Security Council Committee for Sanctions Imposed on Iraq approved the official application which had been presented by the UAE to allow UAE planes carrying relief aid, including medicines, to land in Iraq.



Medicines being loaded for shipment to Iraq.

Many charity events have been organised in the UAE to raise money through the Red Crescent Society (RCS) for needy children in Iraq. As a result of this fundraising, the RCS was able to send new consignments of aid in response to Sheikh Zayed's call for relief for the Iraqi people. A total of Dh 22 million has been despatched in RCS aid to Iraq over a three year period.

Terrorism

The UAE absolutely condemns all forms of terrorism and has consistently pointed out that the targeting of innocent civilians is in contravention not only of human rights but of Islamic values.

It is fully supportive of the Algerian people in their struggle to stem the massacres that are being committed in their country and has offered its assistance to stamp out the horrific and unprecedented crimes being perpetrated there. In this context the UAE has called on Arab countries and the international community to act effectively in support of the Algerian government, so that terrorism in that country in all its

manifestations can be eradicated. 'We hope that there will be a positive response from the Arab countries to this call,' Minister of State for Foreign Affairs Sheikh Hamdan bin Zayed Al Nahyan declared, 'so that the people of Algeria may feel that their fellow Arab have not forgotten them and are with them in both good times and bad. We, as Arabs, should be partners in times of adversity as well as in the good times,' he concluded.

Sheikh Zayed and other members of the UAE government also condemned the horrific crimes committed by terrorists in Egypt, Kenya and Tanzania during the past year, at the same time deploring the US reaction in launching military strikes against Sudan and Afghanistan. Attending the first Arab Anti-Terrorism Conference, held at the end of August in Tunisia under the patronage of the Arab Interior Ministers Council, the UAE stressed the importance of enhancing security, stability and co-operation with other GCC states, Arab and Islamic countries in order to fight all forms of violence and terrorism. The conference called for joint meetings with other Arab League committees to strengthen co-operation in fighting terrorism.

The UAE also re-stated its belief, in line with other GCC states, that the only way to uproot terrorism and confront terrorists and those backing them is through 'international action agreed upon within the framework of the United Nations'.

Disarmament

The UAE has consistently urged the international community to exercise pressure on Israel to join the Nuclear Non-Proliferation Treaty (NPT) and put its nuclear facilities and activities under the control of the International Atomic Energy Agency (IAEA), in order to make the Middle East a nuclear-free zone.

In an address to the UN General Assembly, the UAE's Permanent Representative to the UN warned that Israel's possession of nuclear weapons and unwillingness to submit to international inspection is posing a challenge to the aspirations of the international community for peace, security and stability in the region.

'The UAE believes that maintaining regional and international peace and security requires taking practical and objective measures for disarmament,' he said, affirming the need for observing principles of peaceful co-existence, building confidence, good neighbourliness and settling disputes by means of peaceful negotiations in line with international law.

The statement added that the UAE had signed the Comprehensive Nuclear Test Ban Treaty and the Chemical Weapons Ban and also welcomed international efforts aimed at achieving disarmament in chemical and biological weapons. The UAE supports the stance taken by the Arab group and the Non-Aligned Members on transparency in conventional armaments, taking into account the political, security and military considerations of every region. On the landmines issue, the UAE shares the international community's concern over the dangerous human, economic and environmental consequences of using and planting anti-personnel mines and backs international unanimity to ban the use of landmines.

Kosovo

Following the escalation of hostilities in Kosovo in March of 1998, the UAE called upon the international community to move quickly to prevent a deterioration in the dangerous situation. Urging the international community to end the violence against civilians in order to avoid the occurrence of another Bosnia, the UAE expressed its deep concern over the tragic events which had unfolded in the province. It warned that the outcome of hostilities could be much worse than that which had taken place in Bosnia-Herzegovina, posing the threat of civil wars that could cover the whole Balkan region and neighbouring countries. The UAE called upon the international community to take a decisive position by finding a peaceful solution that leads to stability in the Kosovo province and puts an end to the flagrant violation of human rights against Kosovo civilians by Serbs.'

Libya

The UAE called on the Security Council to take urgent action to allow flights from and to Libya on humanitarian grounds, such as medical trips and the transportation of medical equipment, relief aid and pilgrims. It also called for the lifting of sanctions against the importation of planes, agricultural equipment and spare parts, in order to secure the basic needs of the Libyan people.

The UAE praised Libya for showing its good faith by denouncing all kinds of terrorism, expressing its readiness to fully co-operate with international efforts to eradicate the phenomenon (of terrorism), abiding by Security Council Resolution 731/1992, responding positively to all initiatives aimed at solving the dispute over the Lockerbie bombing with other concerned countries through negotiations, and accepting to hand over the two suspects for a fair trial outside Libya. The UAE noted that Libya had made a number of initiatives to concerned countries to solve the crisis. These initiative had been supported by the Arab League, the Organisation of African Unity (OAU), the Organisation of Islamic Conference (OIC), and the Non-Aligned Movement (NAM).

The UAE also questioned the efficacy of the system under which the UN Security Council imposes punitive sanctions against states violating international law. The UAE expressed the opinion that the system had proved to be a failure as measures adopted in such cases appeared to be disproportionate, in so much as economic blockades targeted the general population. In this context it noted that a fact-finding mission, sent by the UN Secretary General to Libya between 13-18 December 1997, had reported immense material and moral loss to the Libyan people as a result of sanctions, especially in the fields of health, education, agriculture, investment and development.

Whilst reiterating its deep sorrow, along with the rest of the international community, over the tragic destruction of the Pan Am jet over Lockerbie and the dreadful loss of innocent lives which resulted, and strongly denouncing all kinds of terrorism, the UAE renewed its support for Libya on the Lockerbie issue.



*Sheikh Zayed
with H.M.
Sultan Qaboos.*



*Sheikh Zayed
with the
Algerian
President.*

*Sheikh Khalifa
welcoming
Nursultan
Nazarbayev,
President of
Kazakhstan.*



Sheikh Zayed with President Chirac of France.



Sheikh Khalifa with President Clinton.

Africa

Addressing the final session of the UN Security Council on Africa, the UAE's Permanent Representative at the UN said the UAE would like to see the international community back regional and international efforts to develop African resources. This would enable the African people to introduce reforms, in order that they might effectively participate in the world economy.

The UAE expressed its support for UN Secretary General Kofi Annan's report on Africa and stressed the importance of implementing its recommendations, in order to avert the increasing crises and problems faced by Africa. On the instructions of Sheikh Zayed, the UAE has extended humanitarian and development assistance to African countries, and granted soft loans to, and waived the debts of, a number of impoverished African states.

International Criminal Court

The UAE, calling upon the world community to exert greater efforts both regionally and internationally to find peaceful solutions to the conflicts currently raging in various parts of the world, stresses the importance of establishing an independent international criminal court to foster peace and security, and contribute to the achievement of justice and equality, in accordance with international law and the UN Charter. It is hoped that the establishment of the court, under the terms of the International Criminal Court Treaty, will protect mankind by enabling the arrest and prosecution of violators of human rights and humanitarian law. The UAE also urges that the crime of aggression should be clearly defined, taking into consideration relevant UN resolutions and the rulings of the ICJ.

The UAE supported restriction of the court's jurisdiction to prosecution of crimes committed in a state which had ratified the ICC treaty, or where the state of nationality of the accused has ratified the treaty, unless the non-signatory state makes a specific request, or there is a Security Council resolution demanding the lodging of a complaint. In any event, the UAE will co-operate with the court in good faith, without endangering its own safety or national security.

Diplomatic relations

The UAE has diplomatic relations with 143 countries and hosts 62 embassies, compared to three in 1971, in addition to 29 non-resident embassies and 37 consulates in Dubai. The UAE has 40 embassies abroad, five consulates and two Permanent Missions in New York and Geneva.

Security and Defence

The UAE has spent a considerable amount of time and money over the last 27 years building a highly sophisticated infrastructure, in order to provide a good standard of living for its people. At the same time it has achieved an enviable level of political stability in a region which has witnessed two major wars in recent years. This progress and security must be safeguarded and for this reason the UAE has endeavoured to develop an effective police force alongside a defensive military corps. The following extract

from a speech by Sheikh Zayed explains the rationale behind these moves:

We are fully aware that the preservation of these achievements . . . made under the umbrella of the federation require that there should be a shield of security that preserves cohesiveness on the domestic front, enhancing its strength against negative influences that threaten the fabric of our society, like organised crime, violence and drugs, which are something alien to our Arab and Islamic society. Our state therefore, paid special attention to the improving of the security services and to an increasing of their competence and the quality of their personnel, so that they may be able to undertake their duties in such a way as to cope with the huge economic and social changes now taking place, as well as with the changing demographic structure of our society. The strategic geographic location of our country, as well as the mineral and oil wealth with which God has endowed it, require that it must be protected by a military force that is capable of deterrence. This is particularly so in an area of strategic significance such as ours, where we have witnessed in less than a couple of decades devastating wars, regional ambitions and expansionist attitudes. These have obliged us to devote resources and effort to the building up of modern and powerful armed forces, highly trained and equipped with advanced weapons. We have also established military colleges that can train members of our armed forces so that they can preserve the security and stability of our dear land, and deter those who covet it.

The UAE has taken a number of steps in the period under review in furtherance of Sheikh Zayed's objectives for the development of the armed forces in order to achieve effective deterrence on land, air and sea.

In December 1997, Dubai Crown Prince and UAE Minister of Defence General Sheikh Mohammed bin Rashid Al Maktoum issued a resolution ordering completion of the procedure for full amalgamation of the armed forces, including integration of the Armed Forces Central Command (i.e. Dubai) into the UAE Armed Forces.

Further significant arms purchases have also been made this year. Having improved its land defences, the UAE is now concentrating on enhancing air defence systems. The UAE Navy is also in the advanced stage of planning a major upgrading of its equipment.

Having completed a thorough study of the country's needs, the UAE decided to buy 80 F-16s and 30 Mirage 2000 fighter jets, placing an order with France's Dassault Aviation for the 30 new Mirage 2000-9 fighter-bomber jets in December 1997. The military jets will be delivered to the UAE over a three-year period under an agreement which also covers their development and maintenance and includes renovation and re-equipping of 33 Mirage 2000 warplanes purchased by the UAE in 1989.

Following the visit of the top-level UAE delegation to the United States, the decision to purchase 80 F-16 fighter-bomber jets from the US company Lockheed Martin was announced in May 1998, ending an extensive evaluation process that originally included the F-16, the McDonnell Douglas F-15, the Eurofighter consortium's EF-2000 and Dassault Aviation's Rafale. The UAE will be the launch customer for the newest version of the



Headquarters of the Abu Dhabi Fund for Development.

F-16, the Block 60, which incorporates a number of new systems for the multi-role fighter mission. The upgrade package includes conformal tanks for greater range, new cockpit displays, an internal sensor suite, a new mission computer, a new agile beam radar and other advanced features.

The UAE also announced during the Triple International Defence Exhibition, TRIDEX '98, that it intended to purchase four surveillance (CN 235-200) aircraft from the Indonesian company IPTN. The planes will be fitted with reconnaissance equipment from the French firm Thomson.

Aid

An important part of UAE foreign policy has been the practical assistance it has proffered to developing countries. The Abu Dhabi Fund for Development (ADFD) was established in July 1971 on the directives of Sheikh Zayed and Sheikh Khalifa with the aim of providing loans, grants and technical aid on easy terms to Arab, Muslim and other developing countries, in order to enable them to carry out their development plans. The Fund has provided loans, grants and technical aid for the implementation of a wide variety of infrastructural projects, including agricultural, industrial, transport, rural development, housing, water, electricity, road, port, dam and tourism projects. The Fund also manages loans and grants provided by the Abu Dhabi government to different Arab and other countries.

The Zayed Fund for Humanitarian and Philanthropic Projects, which was established in 1992 with a capital of Dh 3.761 million, has also financed numerous projects worldwide.



THE ECONOMY

General macroeconomic trends

Over a relatively short period of time the UAE has been utterly transformed from a subsistence economy, where modest wealth was generated by trading and pearling, to one of the most prosperous and highly advanced societies in the world. Given the UAE's substantial hydrocarbon resources, it is not surprising that much of this socio-economic renaissance, including the UAE's sophisticated infrastructure, was funded by the redeployment of foreign oil earnings. Consequently, the UAE economy in the 1970s and 1980s was marked by sudden explosions of GDP (Gross Domestic Product) brought about by rising oil prices, as well as severe downturns caused by adverse conditions in the oil market. In sharp contrast, economic growth in the 1990s which, despite the peaks of 1996-97, has taken place in an environment of relatively low oil prices, has been moderate but steady, averaging 4.7 per cent per annum between 1991-97. A highly significant development is that, in line with government policy of controlled economic diversification, the independent rise of non-oil sectors such as manufacturing, tourism and transport has underpinned economic growth. This, combined with significant financial reserves, gives the UAE economy considerable resilience.

Because of ample oil exports, the UAE's balance of trade has without exception remained positive in each successive year since 1973. The rapid rise in imports (at an average of 10 per cent per year for the last five years), has been offset to some extent by the rise in exports, and the overall surplus in the balance of payments has also remained positive. In addition, the UAE dirham has considerably appreciated in the last few years against the currencies of some of its trading partners, which has improved UAE's terms of trade.

The other major feature of the economy has been the outstripping of government expenditure by private expenditure. Government expenditure, which had such a crucial role in the development of the oil sector during the early years after the oil boom, while continuing to be significant, now plays a secondary role to private consumption and investment. Rise in private consumption has been helped by the expatriate population's reduced propensity to save and its increased focus on improved standards of living. As a result, private spending is growing at almost twice the rate of public spending.

Oil Share in the GDP



Source: UAE Central Bank Annual Report 1997

GDP by Economic Sector

In Millions of AED's

at Factor Cost and at Current Prices

	1996	1997
Agriculture, Livestock and Fishing	5,052	5,203
Mining and Quarrying	56,900	53,527
A. Crude Oil		
B. Others	577	600
Manufacturing	17,975	19,708
Water and Electricity	3,467	3,660
Construction	14,491	14,000
Wholesale/Retail Trade and Maintenance Serv.	17,269	18,440
Restaurants and Hotels	2,396	2,584
Transportation, Storage and Communications	11,184	11,650
Financial Institutions and Insurance	9,750	10,320
Real Estate and Business Services	16,861	16,350
Social and Personal Services	2,769	2,908
Less: Imputed Bank Services	3,562	3,600
Government Services	17,788	19,580
Domestic Services of Households	1,283	1,348
Gross Domestic Product	174,200	176,278
Total Non-Oil Sectors	117,300	122,751

Source: Ministry of Planning/UAE Central Bank Annual Report 1997

Contribution to GDP by Economic Sector

Sector	Contrib. to GDP	Growth rate
Manufacturing	11.2%	9.6%
Gov. services	11.1%	10.1%
Wholesale/retail/main	10.5%	6.8%
Real estate/business serv.	9.3%	(-3%)
Construction sector	7.9%	(-3.4%)
Transportation/storage	6.6%	4.2%
Finance/insurance	5.9%	5.8%
Agriculture/fishing	3%	3%
Social and personal serv.	1.6%	5%

Source: UAE Central Bank 1997

Expenditure on Gross Domestic Product

In Billions of AED's

at Current Prices

	*1996	**1997
Final Consumption	110.40	115.22
Public Consumption	26.78	27.21
Private Consumption	83.62	88.01
Gross Fixed Capital Formation	47.31	45.09
Increase in Stocks	2.09	2.23
Exports of Goods and Services	123.90	119.28
Minus: Imports of Goods and Services	109.09	104.79
Net Indirect Tax	-0.41	-0.75
Gross Domestic Product at Factor Cost	174.20	176.28

Source: Ministry of Planning * Preliminary Data ** Estimates

Population growth at an average rate of more than 5 per cent in the 1990s has had a significant impact on the economy. While it has strengthened domestic demand, it also puts pressure on infrastructure. More than half of the rise in population stems from an increase in the expatriate labour force, which has also had consequences for the demand structure of the economy. Whereas expatriate labour in the 1970s was dominated by construction labour, the current influx is white collar with greater purchasing and consumption power. Currently, the fastest expanding sectors are hotels and trading, both of which are highly labour intensive. Consequently, these sectors account for the largest increase in labour force.

Expansion in the non-oil sector has been mostly uniform across the board, with the exception of the hotel sector. Meanwhile, the sectors with the fastest growth are transport and banking/finance. However, their contribution to GDP is not large enough for them to make any significant impact on the economic structure.

The open economy means that inflation remains in lower single figures, whereas high GDP guarantees one of the largest per capita incomes in the world. After falling during the early 1990s, per capita income rose again in 1996 to reach Dh 60,800. However, it fell off slightly again in 1997, reflecting population growth and lower oil prices.

Economic activity in 1997

According to the UAE Central Bank, continued implementation of established economic and fiscal policies played a positive role in the development of the productive and services sectors during 1997, and contributed to the increased efficiency and diversification of the production base and the enhanced overall economic performance. This, in turn, coincided with improvements in the business environment and success of monetary and credit policy in controlling and directing credit in such a way as to achieve balanced economic growth.

Despite the contraction in oil generated income during 1997, which coincided with increased spending on final consumption, lower saving ratio and increased dependence on expatriate labour, the country's economy has recorded higher growth rates in most economic sectors.

GDP at factor cost and at current prices grew by 1.2 per cent in 1997, totalling Dh 178.3 billion against Dh 174.2 billion in 1996. The oil sector's output decreased by 5.9 per cent in 1997 compared to its 1996 level, reaching Dh 53.5 billion (30.4 per cent of GDP). This was mainly as a result of falling oil prices, which dropped during 1997 to \$18.8 a barrel from \$19.7 a barrel in 1996. Meanwhile, the output of the non-oil sectors grew by 4.6 per cent to Dh 122.8 billion (69.6 per cent of GDP). Manufacturing industries contributed the highest share: 11.2 per cent or Dh 19.7 billion, compared to Dh 18 billion in 1996, a growth rate of 9.6 per cent, reflecting the fact that the UAE's free market policy, involving free capital movement and the provision of a well-developed infrastructure, has continued to create attractive investment opportunities in the industrial sector. In particular, new projects established in 1997 significantly increased added value in the processing sector.

GDP at Factor Cost by Emirate

In Millions of AED's

Emirate	1994	1995	1996	1997
Abu Dhabi	83246	90593	103746	104326
Dubai	36811	41250	44584	45527
Sharjah	12688	15076	15398	15735
Ajman	2295	2526	2668	2741
Umm al-Qaiwain	833	917	981	999
Ras al-Khaimah	3979	4313	4517	4590
Fujairah	2057	2227	2306	2360
Total	141909	156902	174200	176278

Source: Ministry of Planning Annual Economic Report 1997

Workers by Economic Sector

No.

Sector	1994	1995	1996	1997
Agriculture, Live Stock and Fishing	72495	80604	85038	86738
Mining and Quarrying A. Crude Oil	9167	9400	9776	9950
B. Others	2900	3209	3353	3452
Manufacturing	114000	118800	122420	126300
Water and Electricity	22292	23407	24451	25130
Construction	143250	154300	161110	157100
Wholesale/Retail Trade and Maintenance Serv.	183075	197570	202620	207860
Restaurants and Hotels	33220	36720	38810	40940
Transportation, Storage and Communications	85827	93615	94906	95285
Financial Institutions and Insurance	16858	17392	18017	18377
Real Estate and Business Services	26852	29210	31745	30750
Social and Personal Services	52500	55920	57300	59850
Government Services	131105	135522	140087	145380
Domestic Services of Households	117054	118734	119118	124000
Total	1010625	1074403	1108751	1131112

Source: Ministry of Planning Annual Economic Report 1997

Economic Variables

	*1996	*1997	**1998
Population (000)	2250	2696	2852
Workers (000)	1109	1131	1250
Crude Oil Production (Th. B/d)	2161	2161	2366
GDP (Bill. of Dh.)	174.2	176.3	186.0
Non Oil sectors (Bill. of Dh.)	117.3	122.8	128.5
Gross fixed capital formation (Bill. of Dh.)	47.3	45.1	46.7
Per capita National Income (Th. Dh.)	61.9	59.5	58.8
Final Consumption Expenditure (Bill. of Dh.)	110.4	115.2	123.0
Commodity Exports (Bill. of Dh.)	119.0	114.1	122.0
Commodity Imports (Bill. of Dh.)	96.5	91.6	95.0
Inflation Rate (%)	3.3	2.8	2.1

Source: Ministry of Planning Annual Economic Report 1997 * Preliminary data ** Forecasts

The significant contribution of government services to GDP reflects an increase in government employees' salaries and the state's permanent commitment to improve medical, educational and cultural services for citizens and residents.

Despite the overall increase in value of GDP, GDP per capita fell by 5.8 per cent in 1997 to Dh 67,200 as a result of population growth at rates which exceeded growth rates achieved in GDP. For the same reason consumption per capita dropped by 2 per cent to Dh 33,500, despite the fact that private consumption increased to Dh 88 billion in 1997 against Dh 83.6 billion in 1996.

An analysis of GDP by major expenditure categories shows that final consumption (both public and private) increased by Dh 4.8 billion in 1997. The increase mainly occurred in private consumption, whose contribution to GDP rose from 48 per cent in 1996 to 49.9 per cent in 1997, growing by 5.3 per cent, despite the fact that the population growth was at a rate of 7.4 per cent.

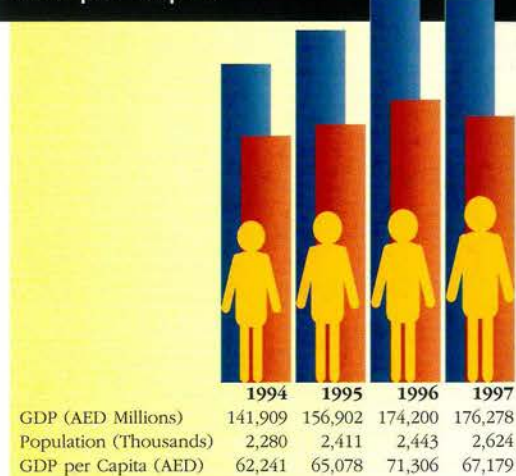
Available data on the number of workers in the UAE show that the total number of workers increased by 2 per cent in 1997 to reach 1.13 million. This increase was distributed among most economic sectors, except the construction and the real estate and business services sectors wherein the number of workers decreased by 2.5 per cent and 3.1 per cent respectively.

Total revenues rose by 10.6 per cent in 1997 to reach Dh 56.7 billion, compared to Dh 51.2 billion in 1996. The

increase occurred in all sources of revenue. Expenditures decreased by Dh 10.2 billion (13.9 per cent) in 1997, dropping to Dh 63.6 billion against Dh 73.8 billion in 1996, mainly as a result of a fall in subsidies and transfers (current expenditures). The deficit in the consolidated government account narrowed from Dh 22.6 billion in 1996 to Dh 6.9 billion in 1997. The bulk of this deficit (91.4 per cent) was financed by returns on government investments and the rest by withdrawals from government deposits with banks operating in the country.

Money supply rose by 13.9 per cent to reach Dh 25.4 billion. The increase was mainly in monetary deposits which grew by 16.1 per cent. Private domestic liquidity expanded by 9 per cent to reach Dh 94.9 billion. Net changes in the overall factors affecting private domestic liquidity has had an expansionary impact of Dh 7.9 billion, owing to an increase

GDP per Capita



Source: UAE Central Bank 1997

Consolidated Government Financial Account

In Millions of AEDs

Item	1996	1997
Revenues	51231	56666
Tax Revenues	9612	10021
Customs Revenues	1427	1676
Other	8185	8345
Non-Tax Revenues	41619	46645
Oil and Gas	37007	41138
Joint Stock Corporations	1989	2652
Other	2623	2855
Expenditures	73825	63581
Current Expenditures	58846	46933
Salaries and Wages	12580	13115
Goods and Services	18295	18359
Subsidies and Transfers	18634	6887
Other Unclassified	9337	8572
Development Expenditures	10193	10843
Loans and Equity Participation	4786	5805
Local	4141	4852
Foreign	645	953
Surplus (+) or Deficit (-)	(-)22594	(-)6915
Financing	22594	6915
Local Banks	2148	598
Other (1)	20446	6317

Source: Ministry of Finance and Industry, Local Government Finance Departments. * Adjusted data **Preliminary data (1) Returns on government's investments

Estimate of UAE Balance of Payments

In Billions of AEDs

	1996	1997
Current Account Balance	24.40	23.34
Trade Balance	28.50	27.14
Total Exports and Re-Exports (FOB)	123.33	121.08
Total Imports (CIF)	-94.83	-93.94
Services (Net)	9.80	9.50
Investment Income	18.10	18.50
Others (1)	-8.30	-9.00
Transfers (Net)	-13.90	-13.30
Private	-13.10	-12.50
Public	-0.80	-0.80
Capital Account Balance (Net)	-22.12	-22.14
Official Loans and Equity Participation	0.11	0.15
Short-Term Private Capital	2.73	2.26
Government Institutions, Private Capital		
Flow & Net Errors and Omissions	-24.96	-24.55
Overall Surplus (+) or Deficit (-)	+2.28	+1.20
Changes in Reserves {(-) indicates increase}	-2.28	-1.20
Net Foreign Assets with Central Bank	-2.20	-1.27
Reserve Position with IMF	-0.08	0.07

* Revised **Preliminary data (1) Includes travel, transport and government services.

by Dh 12.4 billion (15.8 per cent) in net credit at the end of 1996. Such expansionary impact on liquidity was alleviated by a decline of Dh 1.1 billion in net foreign assets and an increase of Dh 3.5 billion in net other factors.

Published data on prices during 1997 indicate a general rise in prices of commodity groups, with the exception of rent and accommodation, which recorded a relative decrease from its levels in the previous year. The average increase may be estimated to have ranged between 2 per cent and 3 per cent during 1997.

The dirham's purchasing power improved during 1997 following increase of the dirham's rate of exchange against all major currencies, with the exception of the pound sterling and the US dollar (fixed). Consequently, the increase in the volume of imports was not reflected in their total value, as imports grew in volume by 10 per cent during 1997, whereas the value of imports dropped by 0.9 per cent, the first such decrease since 1987. The drop in the value of imports coincided with an increase in population (7.4 per cent), hence causing imports per capita to decline from Dh 19,100 in 1996 to Dh 17,300 in 1997.

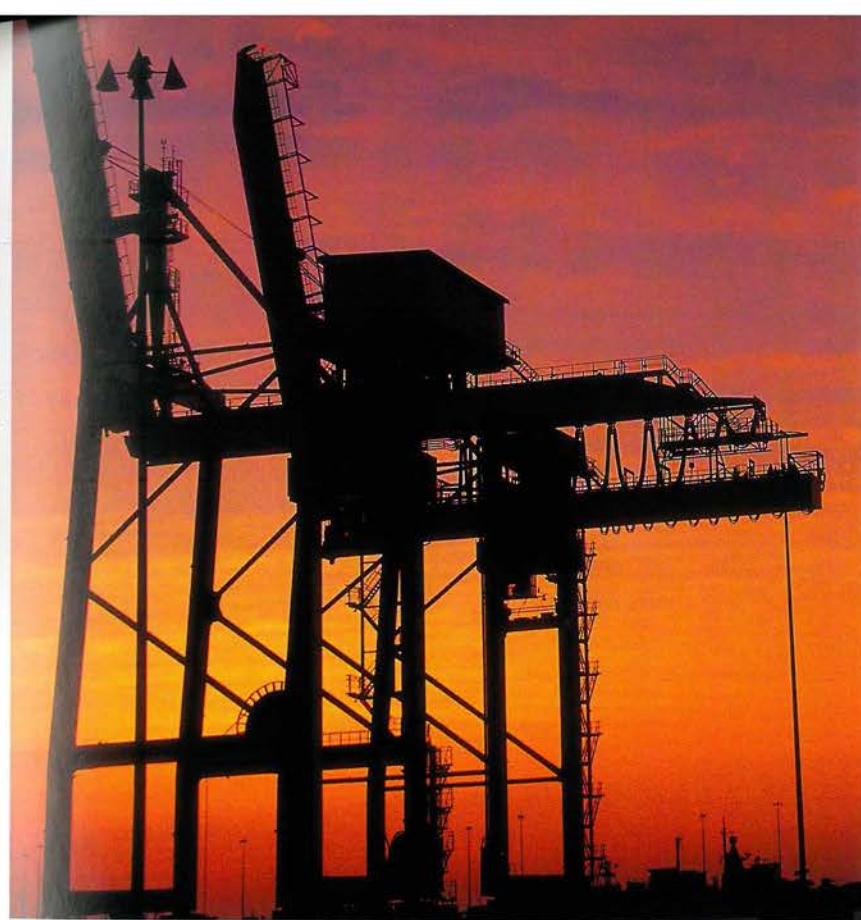
The decline of oil prices during 1997 (-4.6 per cent compared to 1996 levels) and the country's adherence to its set production quota, led to a drop in value of oil exports (-5 per cent) and exports of petroleum products (-1 per cent). It also contributed to a decline in the trade balance surplus (-4.8 per cent) and the current account's surplus (-4.3 per cent) despite the decrease in the value of imports. The overall surplus in the balance of payments has declined for the second consecutive year, reaching Dh 1.2 billion in 1997, against Dh 2.3 billion in 1996.

The economy in 1998

The 1998 budget, details of which were released earlier than usual in the year, reflected the country's economic policy, which aims at diversifying sources of revenue and increasing growth rates of the non-oil sectors.

Under the 1998 budget, the Ministry of Interior was allocated Dh 280.3 million in order to implement 30 projects, the Ministry of Education and Youth received Dh 847 million to complete 46 projects, the Ministry of Health, Dh 184 million for 17 projects and the Ministry of Islamic Affairs and Awqaf expected to carry out 11 projects at a total cost of Dh 108.5 million. About Dh 49.3 million was allocated for the Ministry of Finance and Industry, Dh 26 million for the Ministry of Information and Culture, Dh 1.5 billion for the Ministry of Public Works and Housing, Dh 542 million for the Ministry of Communications, Dh 9.4 million for the Ministry of Agriculture and Fisheries and Dh 54 million for the Ministry of Labour and Social Affairs.

The cost of construction projects such as medical centres and schools is estimated at Dh 772.3 million in the 1998 budget, out of a total figure of Dh 486 billion. An amount of Dh 640 million was allocated for financial investment, of which Dh 500 million is for the creation of a general authority for pensions and social security. The total amount allocated for education in the budget is Dh 4.288 billion, in addition to Dh 288 million for projects in this sector. Budgeted revenues were set at Dh 5.9 billion, an increase of about Dh 800 million over 1997.



The general budget and that of the autonomous state institutions and corporations is estimated at Dh 21.393 billion compared to Dh 19.863 billion in 1997, an increase of Dh 1.530 billion. General revenues are estimated to rise to Dh 19.635 billion in 1998, with an increase in the projected deficit from Dh 987 million in 1997 to Dh 1.758 billion in 1998.

Investments are expected to reach Dh 46.7 billion in 1998, with Dh 22.5 billion coming from the private sector. GDP growth is expected to be below 1 per cent (down from 1.2 per cent in 1997). The share of the non-oil sector is again likely to rise in view of lower oil prices in 1998. Consequently, oil GDP will contract. Trade and hotels are expected to be the fastest growing areas within the non-oil sector. This will mean a greater demand for labour since both trade and the tourism/hotel industry are highly labour-intensive. Exports and re-exports will suffer a slight decline in value, while import demand is likely to remain steady.

With significant reserves of capital, major energy resources and an increasingly dynamic private sector, the UAE is rapidly achieving a sufficiently diversified and viable economic base, ensuring that the country will not be solely dependent on oil for future income and development and placing it in a strong position to weather the uncertainties of the international oil markets.

BUSINESS DEVELOPMENT

Fostering a favourable business environment in the UAE in order to facilitate the private sector's contribution to industrial growth is a major feature of government policy. In particular, keeping the momentum of economic diversification rolling is central to the overall plan to reduce economic dependence on oil while creating employment for nationals. A number of strategies have been adopted in furtherance of these aims, including a streamlining of bureaucratic procedures, reform of commercial laws to ensure effective protection for investors, government support for the development of free zones and the maintenance of free trade, continuance of the privatisation process which started in 1997, implementation of an effective offsets programme, creation of an official stock exchange and the regulation of financial service providers to bolster capital markets.

Added incentives to new investment from overseas business operators and foreign investors are the enviable level of political stability in the UAE, a pleasant and cosmopolitan atmosphere, zero taxation, no exchange controls, low tariffs and, in the free zones, freedom to run businesses with 100 per cent foreign ownership

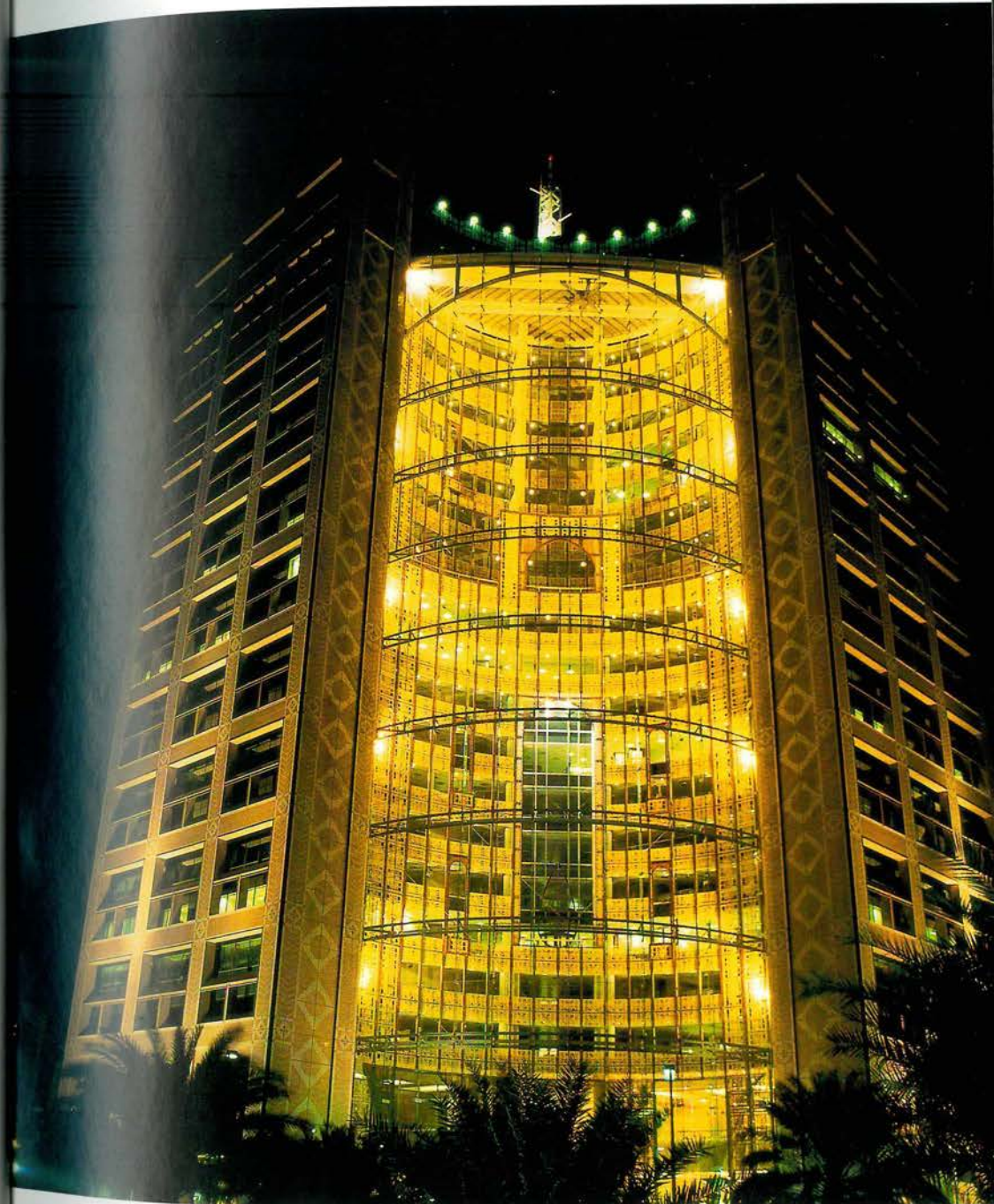
Free zones

The UAE accounts for 25,000 hectares of the 70,000 hectares of public and private land in the GCC that have been designated for industrial purposes. Much of this land is given over to free zones.

As already indicated, a major advantage of free zones is that foreign investors may set up companies which are 100 per cent foreign-owned, with no need for local participation. Among other preferential rules and regulations, a special licence gives a renewable 15-year guarantee of zero taxation (corporate and personal), duty-free imports of inputs, a low tariff structure and full repatriation of profits and capital. In addition, free zones provide excellent infrastructural facilities for investors.

The free zone concept was pioneered by Jebel Ali Free Zone (JAFZ). Its success since its inauguration in 1985 prompted the establishment of free zones in Ajman, at Dubai International Airport, Fujairah, Sharjah International Airport, Umm al-Qaiwain and Ras al-Khaimah.

The potential of these free zones is best exemplified by Jebel Ali, which accounted for 36 per cent of Dubai's exports and re-exports in 1996, 20 per cent of the imports, 39 per cent of the capital invested in manufacturing and 39 per cent of the manufacturing employment in the emirate. The zone has also progressed from being a trading centre to an industrial and high-tech manufacturing base: as of 1998 it had 1,330 investing companies from 80 countries, with 294 of the companies holding manufacturing licences.





The list of goods imported to and exported from Jebel Ali is particularly impressive, reflecting the wide range of products assembled, manufactured, and distributed through the JAFZ. This list includes machinery, electrical equipment, textiles, chemical products, base metals, optical, photographic and cinematographic equipment, precision, medical and surgical instruments, clocks and watches, musical instruments, prepared foodstuff, beverages, tobacco and vegetable products, plastic and rubber articles, stone, plaster, cement, ceramic products, glass, wood pulp, paper, jewellery, leather goods. In June 1998, JAFZ became the first free zone in the world to receive the distinguished ISO 9002 award in recognition of its quality services.

A number of new zones are in the planning stage or under construction, notably Sadiyat Free Zone (SFZ) in Abu Dhabi. SFZ, concentrating on bulk commodity trading rather than manufacturing, will create a new phase of comprehensive economic development in Abu Dhabi that will place the UAE in a primary position in international financial, commercial and investment markets. SFZ is destined to become a major centre for international financial dealings and for the receipt, delivery and storage of 67 basic commodities, including precious metals, gems, oil, grains and ores. The zone will have extensive warehousing, its own stock exchange, a futures exchange and a settlement and clearing house, as well as an international dispute centre.

Sadiyat will be the second-largest free zone of its kind in the region after Singapore, and one of the biggest commodity markets in the world. The zone is ideally situated between the eastern markets in Sydney and Singapore and western markets in London,



Chicago and Rotterdam. The zone will also bridge the time gap between the closing and opening times of the Far East and Western stock markets. Investors will be permitted 100 per cent foreign ownership, and there will be simplified customs procedures, tax and duty free regulations and no currency transfer restrictions.

Sadiyat Island, located some 6 kilometres off Abu Dhabi city, will be linked to Abu Dhabi via a causeway. Sadiyat Development Company (SDC), which will be responsible for construction and management of the facilities in the zone, will receive a 25-year concession agreement, renewable for a further 25 years, from the Sadiyat Free Zone Authority (SFZA). While the development company will have full control over the infrastructure, which will take about 32 months to complete and will include an airport, a port, hotels, recreation centres and residential units, SFZA, acting as the regulatory body, will licence all the companies that wish to open branches on the island. It will also regulate trading and other financial activities on the island. The zone is expected to generate around \$7 billion in profits through its 25-year operation.

Hamriyah in Sharjah is another free zone which has been in the news over the past year. By the end of 1998, 95 per cent of the infrastructure will have been completed at Hamriyah and the volume of investment at the zone is expected to exceed Dh 2.8 billion by then. The zone has attracted much interest from international projects and investors, and over the next two years the Hamriyah Free Zone Authority is hopeful of accommodating 200-300 companies. Currently, the zone houses a liquefied petroleum gas storage and export facility and an oil refinery. The port situated inside the free zone has started receiving vessels.



Determined to keep the momentum of industrial growth going, the UAE is now planning ever more sophisticated services as the traditional industrial estates evolve into business parks. One of the recent initiatives in this area is the decision by the Dubai Investment Company to develop an international business park on a 3,200 hectare site near Jebel Ali.

Meanwhile, Ras al-Khaimah in the north is establishing a free zone on the island of Hulayla adjacent to Mina Saqr, which is also taking on many of the attributes of a business park, underlining the merging of the free zone and business park approaches. Hulayla is offering 100 per cent ownership of land to private and foreign companies. Infrastructure investment in the zone is being carried out by the government, while management and operation is being given to a specialist international company on a long-term basis.

Offset programme

Set up in 1990, the UAE's offset programme requires defence manufacturers with contracts worth more than \$10 million to establish joint venture projects that yield profits equivalent to 60 per cent of their contract value. The projects must be commercially viable joint ventures with local business partners, thereby ensuring that the country has a long-term commitment from its defence contractors, and is designed to bring in the kinds of technology that industrially advanced countries are unwilling to share. This transfer of

technology can provide the means for the UAE to further diversify its economy. The UAE's offset programme hopes to generate projects worth Dh 29.36 billion (\$8 billion) over the next ten years.

To date, 30 projects have been launched, including a technologically advanced hospital, the Gulf Diagnostic Centre; an innovative solar power company, GPSC; a high-tech imaging and geo-information facility, the Gulf Centre for Remote Sensing (GCRS); the Oasis International Leasing Company, the first of its kind in the Gulf; and Tabreed, a cooling system manufacturer.

Privatisation

Abu Dhabi's decision to privatise utilities could give a tremendous boost to foreign and domestic private business. The process is being overseen by the Privatisation Committee for the Water and Electricity Department (PCWED) of Abu Dhabi, a government body set up in 1997 to oversee utility privatisation, a heavily-subsidised sector that has been dependent on government investment.

The privatisation process not only attracts private sector capital, it also makes use of that sector's capabilities in providing quality services. Privatisation will also ensure that projects will be carried out at their actual cost and in the shortest possible time, create jobs, raise living standards, realise a balance between social and commercial needs and will, in addition, enable the government to concentrate on executing major, and more important projects in such areas as health and education.

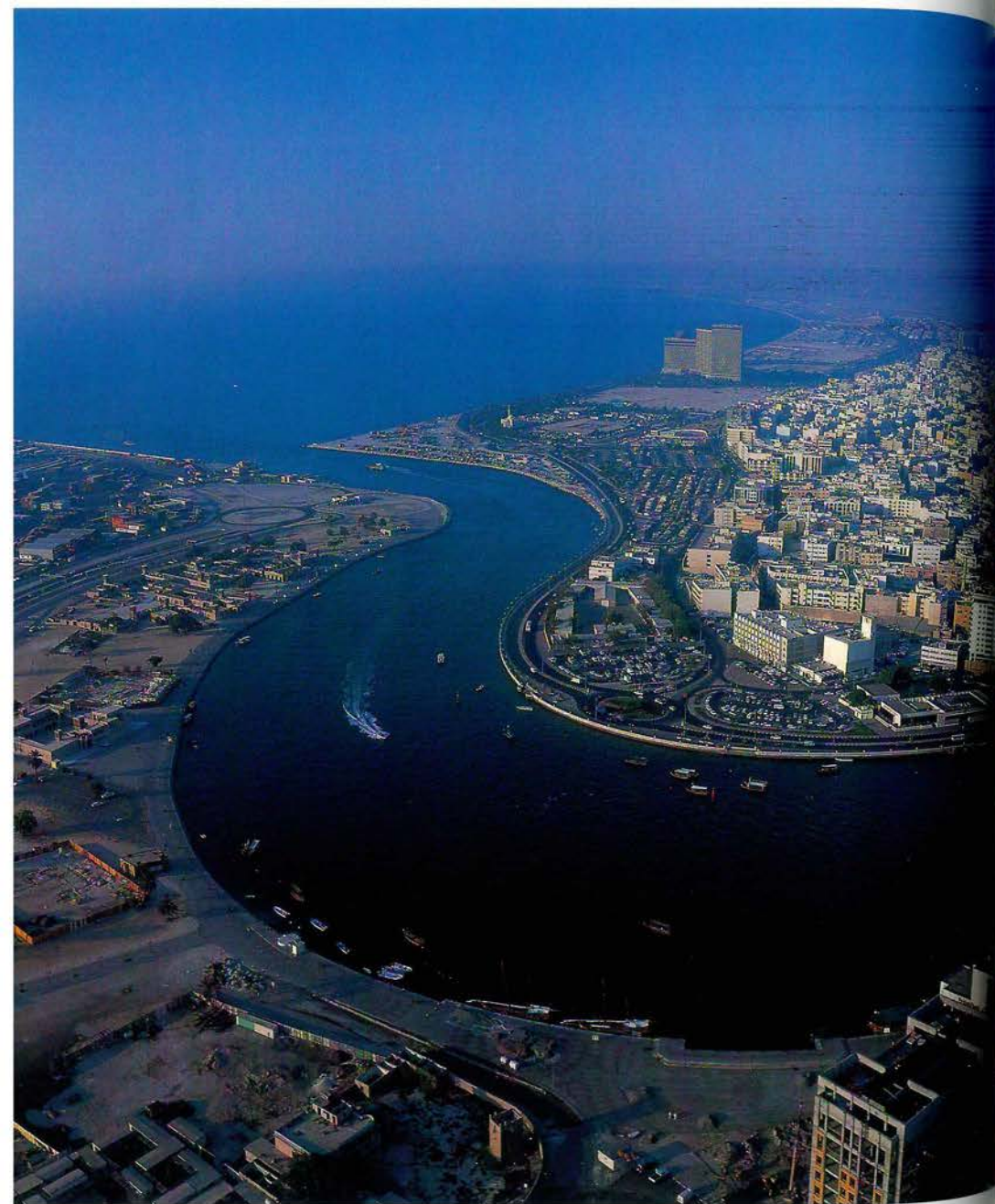
The first new independent power project, Taweelah A2, attracted a huge amount of interest, and foreign power companies are eagerly awaiting the planned break-up of existing generating capacity into separate companies with private participation. Meanwhile, a plan to privatise the collection and disposal of Abu Dhabi Municipality's waste will soon be implemented.

If the experiment proves a success, private capital will be permitted in other infrastructural sectors such as ports and roads. However, a cautious note has been sounded by the federal authorities who, whilst underlining their support for the concept, point out that shifting power from the public to the private sector is a challenging task that requires adequate time for the necessary groundwork.

Foreign trade policy

The UAE operates a very open trade policy and is committed to trade liberalisation as a means of encouraging industrial growth. Most goods may be imported freely and without the need for specific import licences. Tariffs are low; at a standard 4 per cent among the lowest in the region. Essential products and industrial inputs, various foodstuffs, medicines, gold, iron and steel, farming products, fertilisers and pesticides and industrial raw materials are all duty-free. Products made in the GCC also receive automatic exemption.

In 1996, the UAE became a member of the World Trade Organisation (WTO), following approval of the UAE's schedule for liberalising goods and services, excluding telecommunications and financial services. While the Uruguay Round was participated in by only



Dubai.



five Arab countries, most Arab countries have now joined WTO. The UAE believes that joining WTO is vital for Arab nations. The inflow of foreign investment will lead to a more diversified regional manufacturing base, thus making Arab countries more competitive globally. By reducing the barriers to trade, the region will also benefit from international research and development.

However, according to Sheikh Hamdan bin Rashid Al Maktoum, Minister of Industry and Finance, a clear understanding of the conditions and implications of accession to the WTO is vital if the commercial sector is to reap the benefits of equal competition within regional and world markets. In addition, changes in current economic and trade policies will have to be agreed.

Protection of intellectual property rights and trademarks

Recognition of the close link between the protection of intellectual property rights and foreign investment has acted as an incentive for vigorous action against intellectual property violations in the Emirates.

The UAE is a member of the Paris Convention for the Protection of Industrial Property, the World Intellectual Property Organisation (WIPO), and a signatory of the Trade Related Aspects of Intellectual Property Rights (TRIPS) with which it must comply by 2000. The country also acceded to the International Patent Co-operation Treaty in 1998: the latter protects inventions registered with the International Bureau of WIPO and local patent offices.

Federal Law no. 40/92, Protection of Intellectual Works and Copyright, was issued on 28 September 1992, embracing all aspects of intellectual property such as trademarks, patents and industrial design and copyright. After an extended grace period, the law was implemented in the second half of 1993.

Enforcement of trade marks comes under the purview of the Ministry of Economy and Commerce, the copyright law under the Ministry of Information and Culture and the patent and design law under the Ministry of Finance and Industry. Enforcement is also assisted by the Ministry of Interior, particularly the police and the Criminal Investigations Department, Dubai's Department of Economic Development and Sharjah Municipality. International organisations that are also engaged in the anti-piracy drive in the UAE are the Motion Pictures Association (MPA) the Business Software Alliance (BSA) and the International Federation of the Phonographic Industry (IFPI).

In the last few years the UAE has achieved tremendous results in fighting piracy at the local and federal levels. In particular, the Ministry of Information and Culture has been active in its efforts to ensure that all UAE businesses comply with internationally-recognised standards and regulations concerning protection of copyright. Particularly noteworthy have been the Ministry's raids on video and music shops and software outlets to seize illegal video, audio and software, and hardware duplicated goods. A number of these outlets have been closed down and the UAE was the first country in the region to impose a jail sentence for piracy.

As a result of increased vigilance well-known brands are now taking action against trademark counterfeiters, clamping down severely on the once popular market in fake



watches, t-shirts, scarves, bags, fragrances, leather goods etc. In addition, milestone judgments have been made, which laid down guidelines and principles for trademark protection. These enhance the action taken by local authorities for protection of trademark proprietorship.

The Ministry of Information and Culture's efforts in the fight against software piracy were recognised in 1997 by the BSA (the organisation of major American software developers whose recommendations are the basis of the US Trade Representative Office's action against countries) when they awarded a special prize to the Minister of Information and Culture, Sheikh Abdullah bin Zayed Al Nahyan. The Ministry has renewed its endeavours in 1998, dealing effectively not only with re-sellers but with end-users.

In its effort to stamp out piracy, the BSA joins forces each year with the Dubai World Trade Centre at the Gulf Information Technology Exhibition (GITEX), and its retail partner Computer Shopper, to promote the use of original software. The BSA's watchdog committee monitors the demonstration, display and sale of products, checking for illegal copying of software programmes. At 1997's Computer Shopper a stand was closed down for selling pirated software. The closure was authorised by the Dubai Department for Economic Development as part of its anti-piracy campaign.

Due to the UAE's aggressive campaign, software piracy is currently estimated at a little over 60 per cent in the UAE and is expected to reach the EU's 50 per cent level by the year 2000. Software piracy in the UAE was 88 per cent in 1995 and 72 per cent in 1996. Losses declined from Dh 36 million in 1995 to Dh 31.5 million in 1996, and to just Dh 19.5 million in 1997. However, despite admissions that the UAE 'has made significant strides in reducing copyright piracy and some progress toward tightening trademark protection', the US has retained it on its unilateral Special 301 Trade Watch List of countries monitored for violation of intellectual property rights.

The UAE continues to examine ways and means of improving its copyright and patent laws and enforcing the rules and regulations that are already in place. The Ministry of Information and Culture has already taken practical steps to amend the 1992 law on copyright, ensuring that the UAE remains the leading Arab country in this field. The Ministry of Finance and Industry is also planning to amend the patent and design law.

Sheikh Khalifa award

One of the ways of encouraging industrial growth is to support the attainment of higher standards. To this end the Abu Dhabi Chamber of Commerce and Industry inaugurated the 'Sheikh Khalifa Award for Excellence' in June 1998. The award is aimed at encouraging the manufacturing and services sectors to attain higher standards and efficiency in management, in the light of increased competition in global markets.

Only those firms with nationals holding a minimum 51 per cent stake can prequalify for the annual award which will cover firms in the services, finance, trade, tourism, contracting and professional sectors. General criteria have been set for all sectors, with particular standards for each activity. The award's secretariat will prequalify companies, especially small enterprises, by helping them develop their capabilities.

FINANCIAL SERVICES

Stocks and shares

Establishment of an official stock exchange is seen as a key factor in improving the investment climate for private investors in the UAE, a strategy which will ultimately aid economic diversification. To this end inauguration of the official stock market is expected, in 1999, to replace the over-the-counter market that currently handles daily buying and selling of shares in the UAE.

Federal government has already approved a framework for the new exchange, the working of the exchange to be run by a Securities Exchange Board comprising the Ministry of Finance and Industry, the Ministry of Economy and Commerce and the Central Bank of the UAE. A separate Securities Exchange Authority will oversee enforcement of regulations which will ensure transparency, protection and enforcement of shareholders' rights. Regulations will cover supervision, auditing and accounting procedures, as well as rules for record-keeping, inspection, disclosure and disciplinary measures. Once the Securities Exchange Authority is established, it will apply for membership of the international security organisation (IOSCO), which has 134 member agencies from 81 countries.



At present, share dealing is conducted by telephone through a steadily increasing number of licensed brokerage houses and the number of joint stock companies has grown from only 14 in 1982 to 88 in 1997, representing 47 per cent of GDP for 1997. Such companies are mainly in the fields of commerce, banking, finance, insurance and industry. The majority, some 55 of the 88 publicly-owned firms, were established in the 1963–1990 period, the first being the National Bank of Dubai in 1963. There has also been a sharp increase in investors over the last three years: the number of individual local investors having risen from about 5,000 in 1995 to over 100,000 in 1998.

Commercial banks' share of the combined capital of the registered joint stock firms was the highest at 45 per cent, in actual numbers representing 22.4 per cent of the total number of such firms in the country. Industrial units have a 19 per cent share in the combined capital, but 28.2 per cent in terms of the number of firms. Next come services firms with 16.7 per cent of the capital and 9.4 per cent in terms of numbers, followed by commercial establishments – 10.6 per cent and 8.2 per cent; insurance firms – 5.5 per cent and 23.5 per cent; and agriculture and food sector-related firms with 2.9 per cent of the total capital and representing 8.2 per cent of the total number of such firms.

1997

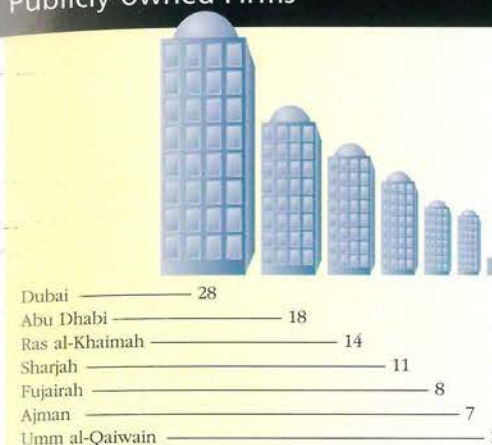
Nineteen ninety-seven was a seminal year for share dealing in the UAE. Major developments included the launch of the UAE's first equity fund (Emirates Equity Fund, EEF) open to expatriates. Inauguration of the fund in June was a major step towards liberalising the stock market and gave foreign and expatriate investors access to UAE stocks for the first time, as the fund is primarily intended to be invested in the local capital market.

Expatriate investment in the fund had been limited to 20 per cent of the total, with the remainder available for nationals. However, the ceiling for expatriate investment was later raised to 49 per cent. The cap on individual foreign and expatriate investment was also raised to Dh 5 million from the Dh 500,000 allowed when the fund opened. Restrictions were lifted to facilitate the flow of foreign investment into the country. The EEF, which collected Dh 275 million during its 15-day initial offer period, has grown in value and in net subscriptions to over Dh 400 million.

Another precedent was set during the launch of EEF with the setting-up of the first local investment bank Emirates Merchant Bank Limited (EMBL) to handle the issue. EMBL was constituted by separating off all investment banking activities earlier carried out by Emirates Bank International (EBI). EMBL manages the open-ended EEF, which was earlier managed by the Treasury and Capital Market Division of EBI.

Formation of EMBL underlines the fact that local institutions have enough expertise and confidence to handle even transactional offerings, despite the absence of a domestic stock market. EMBL was one of the three lead managers for the Arab Insurance Group's public issue offering of 145.8 million shares of \$1.6 each in the Arab world. It was also the sole placement agent for the pan-Arab offering in Oman, Qatar and the UAE.

Publicly-owned Firms



EEF's success demonstrates that despite the absence of an official exchange, stocks with genuine value will continue to have international investors' attention, and, as and when the market liberalises, foreign liquidity will flow in. In any event, massive over-subscription in the primary market indicate that domestic liquidity is sufficient for the time being.

The rush to purchase initial public offerings (IPOs) has been overwhelming. As a result total subscriptions exceeded 20-fold

the volume of offered shares. Issues like Emaar Properties and Abu Dhabi Islamic Bank (ADIB) are ample evidence of the strength of the primary market. The Emaar issue of Dh 657 million, for example, collected Dh 3.377 billion, a five-fold over-subscription. The response was so great that the Dubai government authorised raising the initial capital of the company from Dh 540 million to Dh 1 billion. The government also took a holding of 10 per cent (Dh 100 million) as a founder shareholder, raising the promoter's stakes in the company to Dh 343 million. Plans are underway to double Emaar's capital base to Dh 2 billion through an issue of 50 million shares, in order to finance its real estate development ventures, including the Dh 16 billion Westside Marina project.

Among other shares, the ADIB issue, which aggregated to Dh 610 million, collected Dh 11 billion. IPOs of, Union Insurance and Oasis Leasing also drew large amounts of funds.

Overall, the new issues that also provided immediate capital appreciation upon trading had their spin-offs into the secondary market, resulting in stock prices rising rapidly during October and November.

Emirates Equity Index (EMNEX), a new weighted market capitalisation index which moves according to price changes and the number of shares issued in 34 stocks, peaked in November, recording a high for the year 1997 at 1840.57. The National Bank of Abu Dhabi's Share Index also topped 3390 points during this period. However, downward corrections started thereafter and EMNEX slid more than 100 points in a little over one month, levelling off at around 1710 points.

Establishment of the three new companies in 1997, coupled with more share flotations by existing institutions and strong corporate performance, boosted UAE market capitalisation to a record Dh 90 billion (\$24.5 billion) in 1997, up by \$9.1 billion over 1996. This increase turned the UAE into the second-biggest stock market in the Arab world after the Saudi exchange, capitalised at around \$50 billion.



Investors' returns from the secondary market in 1997 were estimated at 37 per cent. Thirty per cent of the surge came from capital appreciation, while the balance, 7 per cent, flowed in from cash dividends, bonus issues and allied benefits. Balance sheets showed profitability growths in the range of 15 per cent to 25 per cent. The data indicated total annual stock market growth of 20–30 per cent. Banks and other financial companies, as well as the services sector, performed particularly well.

In December 1997, six leading local banks outlined plans to initiate a share depository and clearing system in anticipation of the new stock exchange. The banks are the National Bank of Abu Dhabi, the Abu Dhabi Commercial Bank, Abu Dhabi's Union National Bank, MashreqBank, Emirates Bank International and the National Bank of Fujairah. Other banks are expected to participate at a later date. The banks will set up a jointly owned company, Union Securities, which will be managed by UNB and the American-based Andersen Consulting. The aim of the new system is to reduce settlement risks and encourage both foreign and local investment in UAE companies, thereby strengthening capital markets. A link-up is also planned with the existing banking network, as well as connections with the GCC and international markets.

The stock market in 1998

Nineteen ninety-eight proved to be another successful year for the stock market as it awaits the establishment of the official exchange. In the second half of the year most shares touched their highest ever, with unprecedented demand in September boosting market capitalisation almost twofold to Dh 173.61 billion, from Dh 91.86 billion at the beginning of the year. The services sector continued to lead the market but bank shares remained a firm favourite, their value registering an annual growth of 15–25 per cent over the past three to four years, and a similar trend took place in 1998. The launch of the EEF in 1997 and the Emirates Banking Stocks Fund (EBSF) in 1998 have instilled confidence and trust in investors in relation to the safety of their investments.

The EBSF offers an attractive investment opportunity for both nationals and non-nationals and is destined to play a key role in enhancing the maturity of the UAE equity market. EBSF is an open-ended fund which invests in a well diversified portfolio of top-performing UAE, regional and international banking equities; as well as in funds that invest in such securities. Actively managed by EMBL, it is the country's first sector-specific mutual fund and is open for subscription for UAE nationals and non-nationals, with the ceiling on total non-national investment being 49 per cent of the fund's assets. Non-nationals can buy units worth up to Dh 5 million (US\$1.36 million) per applicant.

The fund attracted Dh 308 million during the initial offer period, well above the Dh 100 million expected when it opened on 1 June. A sizeable portion of the funds was collected just days prior to the closing on 21 June.

Eighty per cent of funds for the initial IPO was generated in the UAE, institutional investors committing 40 per cent. Of the 2,400 investors who filed for applications nearly 55 per cent were non-nationals, with Omanis, Qataris, Kuwaitis, Lebanese and expatriates in the UAE being major investors.

Yet another investment opportunity arose when a new Dh 500 million offset venture with several ground breaking features offered 2.75 million shares worth Dh 137.5 million to nationals through an initial public offering in 1998. The IPO constituted 55 per cent of the paid up capital of Dh 250 million of the National Company for Central Cooling, Tabreed. Founders include the Private Department of President H.H Sheikh Zayed bin Sultan Al Nahyan, UAE Offset Group, National Investor, Giat Investments, Emaar Properties, Union Trust, Dubai Investments and Concept Engineering.

The issue was handled on behalf of the founders by Union Trust and National Investments. A total of 200 shares per person was offered to investors who had to initially pay 50 per cent of the nominal value of Dh 10 per share, with the remainder to be collected any time within a period of five years. The initial offering was over-subscribed by 3.5 times as over 160,000 applicants paid more than Dh 500 million for the outstanding 27,500,000 shares. Other than nationals, Giat Investments and Concept Engineering are the only companies being permitted to take a stake in Tabreed. It is expected that Tabreed, after convening its first general assembly and approval of its board of directors, will purchase Gulf Energy Systems (GES) an offset joint venture founded in 1995 in Abu Dhabi.

Another important IPO in 1998 was that offering shares in a new Dh 1 billion joint

stock firm, Emirates Basic Industries Company (SINA'AT). The Dubai government and over 100 industrial investors contributed to the venture, the first industrial public joint stock company of its kind set up in the country. The remaining shares were offered for public subscription among UAE nationals. Company activities are focused on chemicals, petrochemicals and other basic industries, which constitute 75 per cent of the total local industrial product.

The Al Fahim business group is also planning to sell a controlling stake in four major hotels in the UAE, the first initiative in the hotel sector towards the transfer of large family firms into publicly-held companies. Al Fahim Group invited national private investors to buy 60 per cent of its UAE Crowne Plaza hotels, worth nearly Dh 1.8 billion. The sale will include the two five-star Crowne Plaza hotels in Abu Dhabi and Dubai, and two five-star hotels under construction in Sharjah and Fujairah. Abu Dhabi Investment Company will underwrite the issue.

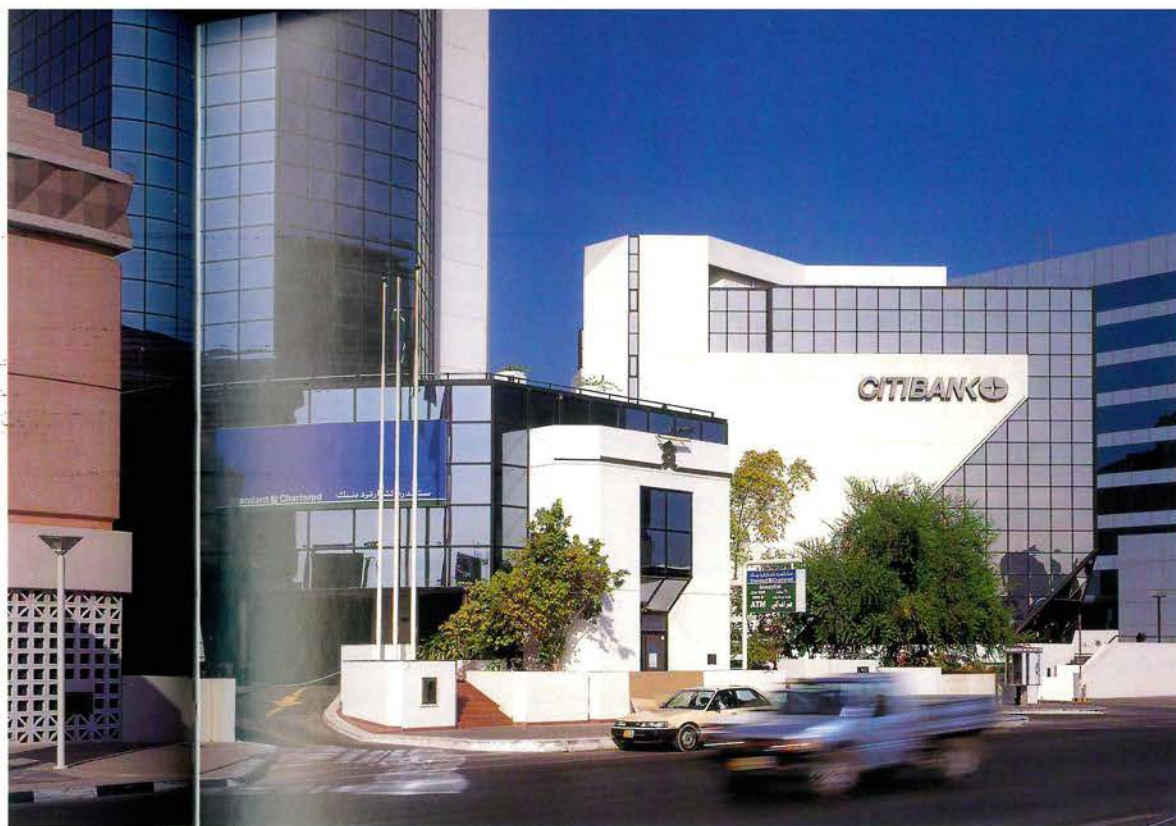
Other IPOs are proposed, including those for Abu Dhabi Broadcasting Company, Abu Dhabi Gas Distribution Company, Abu Dhabi GSM Franchise Company, Emirates Islamic Finance Company, Abu Dhabi Satellite Television Company, Dubai International Islamic Bank and ETISALAT Cable Television Company. Two new IPOs also worthy of mention offer the chance to ease budgetary pressures. One will be for an infrastructure development company with the principal task of maintaining Public Works Department projects. The second involves a new real estate company established under the offset programme and whose main objective, like Dubai's Emaar, is the development of business and tourism properties, initially focusing on inland Al Ain.

However, the most significant IPO should be the issue for the Middle East's largest free storage zone, Sadiyat Free Zone (SFZ), which promises to be the biggest-ever share issue in the UAE. The \$3.67 billion SFZ offering comprises ordinary shares and global depository receipts.

There was strong international interest in SFZ as representatives from more than 300 local and international companies met project operators in 1997 to discuss the issue, while managers of world funds controlling more than \$1,500 billion came to Abu Dhabi to discuss the venture early in 1998.

The IPO for the Sadiyat Zone will be the largest-ever share flotation in the UAE. For the first time equity (in this case amounting to \$1.67 billion) will be offered to international investors and expatriates living in the UAE. The flotation will be managed by Japan's Nomura International, a London-based investment bank, and the shares are to be listed on the London and Luxembourg markets.

It has been estimated that the Sadiyat project will generate a cash flow of \$170 billion to the economy over a period of 50 years, leading to increased consumer investment opportunities for UAE nationals and expatriates and the development of a world class financial market for UAE corporations. With this single project, it is expected that Abu Dhabi will substantially diversify its economy and that of the UAE.



Banks

The UAE has 48 banks with 300 branches, including 28 locally-incorporated foreign banks. Banks in the UAE have seen a substantial increase in aggregate assets, total assets, and unclassified assets such as fixed deposits and inter-branch transactions, over the past few years. There has also been a marked growth in domestic credits and investments, foreign assets cash and deposits.

Nineteen ninety-seven was the third good year in succession for banks operating in the UAE: their aggregated balance sheet grew by Dh 18.35 billion (9.5 per cent) to reach Dh 210.88 billion at the end of December 1997. Local banks increased their profits by 26 per cent and foreign banks by 15 per cent.

The prospect of increased competition, coupled with the surge in profits in 1997 to one of the highest levels since the end of the oil boom 15 years ago, has encouraged the Emirates' 19 national banks to increase their capital, improve their capital adequacy ratio (the ratio between shareholders' equity and assets) and expand their sphere of activities. These moves should enable the national banks to add to their investments, strengthen their overall financial position, and face growing demand for credit. (Credit extended increased by Dh 10.74 billion (10.1 per cent) to a record Dh 116.92 billion, compared to an increase of 4.1 per cent in 1996.) Several foreign banks have also raised their capital following Central Bank instructions to the country's banks to increase their adequacy.

The Central Bank set the capital of each bank at a minimum Dh 40 million (\$10.9 million) and stressed that adequacy must not go below the 8 per cent floor recommended by the Bank for International Settlements. Central Bank rules also place curbs on credit, which must be proportionate with shareholders' equity. This equity, which covers capital and reserves, has steadily grown in the past three years as a result of capital increases. From Dh 21.6 billion (\$5.88 billion) in 1995, it rose to Dh 23.2 billion (\$6.3 billion) at the end of 1997. With assets standing at around Dh 190 billion (\$51.7 billion), this means their combined adequacy stood at 12 per cent at the end of 1997.

The decision by the GCC summit to allow national Gulf banks to open branches in member countries is a major step towards establishing a Gulf common market, which will also help to create an ideal environment for Arab bank mergers in the region. At present, there are some 58 Gulf Arab banks in GCC countries with a combined network of 1928 branches.

Under an exemption it negotiated on its adherence to the General Agreement on Trade in Services (GATS), the Emirates can continue to apply or amend its current policy on the opening of new branches by foreign banks and other financial service providers. This, in effect, means that the UAE can either continue to restrict or liberalise its policy on granting market accessibility to financial services providers on a quid pro quo basis.

UAE nationals at work in Emirates Bank International



Credit Extended by Banks

In Millions of AED's

	1996	1997
1. Credit to Residents:	95,156	105,415
A. Loans, Advances and Overdrafts	86,534	95,177
Government	10,394	9,105
Financial Institutions	1,352	1,580
Industrial and Commercial Organisations	57,264	63,577
Other	17,524	20,915
B. Real Estate Mortgaged Loans	5,991	7,253
C. Discounted Commercial Bills	2,631	2,985
2. Credit to Non-Residents:	11,024	11,504
A. Loans, Advances and Overdrafts	9,568	10,431
B. Real Estate Mortgaged Loans	18	21
C. Discounted Commercial Bills	1,438	1,052
Total Bank Credit	106,180	116,919

Source: UAE Central Bank 1997

A new banking law is in preparation, which is expected to codify existing banking regulations and address more complex aspects of finance including derivatives, investment funds, syndications, foreign project finance mechanisms such as build-own-operate (BOO), build-own-operate-transfer (BOOT), as well as cross-border finance. Full banking licences will permit banks to undertake all aspects of financial activity, while restricted licences will limit financial companies to specific areas of operation.

Emiratisation of banking jobs is another vital issue which is being seriously addressed. At present the ratio of local employees in the banking sector is below the desired level.

Insurance

The UAE insurance industry suffered a downturn in 1997, with a study of the 11 listed companies revealing a 0.8 per cent decline in net premium growth. The fall has been attributed to the general economic slowdown combined with fierce competition and declining premiums. The sector also witnessed an overall 6.9 per cent drop in underwriting profits, compared to a 2 per cent rise in 1996.

Indications are that conditions in 1998 will not be any better for the main insurance business. Companies that continue to diversify their asset base, and thereby their risks, will be better-placed to survive the downturn. Paradoxically, the UAE insurance sector is trading at a premium to other GCC markets.

Union National Bank has recently introduced the UNB Insurance Index (UII), with the new index weightage correlating to the amount of free float market capitalisation a company has in the market. While most newly floated companies have 100 per cent public shareholding, the older established ones are much larger in terms of equity base, resulting in a higher weightage in the index. Accordingly, the adjusted market capitalisation of insurance companies, as of 1 August 1998, was Dh 5.96 billion, accounting for 77 per cent of the sector's total market capitalisation of Dh 7.75 billion.

OIL AND GAS

The UAE's proven resources of oil are estimated at around 98.1 billion barrels, representing 9.5 per cent of world reserves and placing the UAE in third position in the world in terms of reserves. Capacity is currently estimated at around 2.5 million barrels per day (mbpd), which will rise to around 3 mbpd in the year 2000. There are plans to boost that level to 3.6 mbpd in 2005 and 4 mbpd in the year 2010. Natural gas reserves are estimated at 5.8 trillion cubic metres, the third largest in the Middle East, and annual production at 27.5 billion cubic metres, up from 18.1 billion cubic metres in 1990. Considerable investment is being expended on the energy sector to improve production, especially of gas, and to develop downstream industries.

Oil prices

The UAE's pricing policy is based on a desire to help the stability of the oil market, at the same time satisfying both the producer and consumer. Energy policy is formulated through co-operation with fellow Organisation of Petroleum Exporting Countries (OPEC) members, the GCC and Arab countries.

Production is limited by quotas agreed within the framework of OPEC. UAE adhered to its specified production quota of 2.161 mbpd in 1997 and this contributed to stabilising oil prices, which were favourable for much of that year, rising to over \$25 per barrel, but averaging around \$18.5 per barrel. Maintaining production levels led to a significant decline in the UAE's oil revenues and a reduction of the oil sector's share in total GDP.

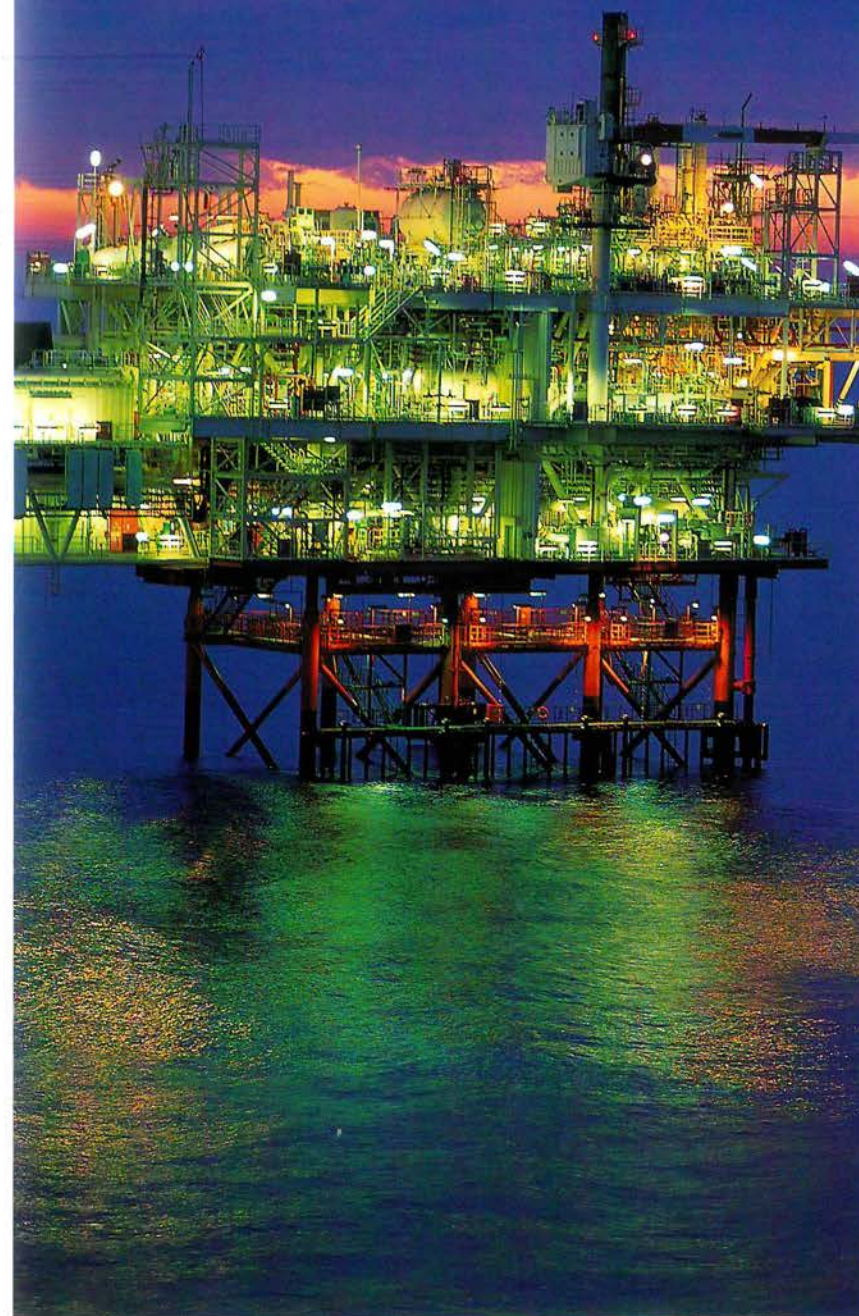
At a meeting in Jakarta in November 1997, OPEC increased its production ceiling from 25.33 mbpd, to 27.5 mbpd, allocating a 2.366 mbpd production quota to the UAE. By early January 1998 crude oil prices had fallen to their lowest levels since April 1994.

As President of OPEC, the UAE responded to the crisis by calling upon their fellow members to strictly adhere to their quotas in order to avoid causing a glut on the international market. Unfortunately, a reduction in demand, apparently brought about by Asia's

Summary of UAE's Oil Sector

UAE Proven Reserves	98 billion barrels
Share in World Reserves	10%
Share of OPEC's Reserves	15%
Abu Dhabi's Reserves	92 billion barrels
Dubai	4 billion barrels
Sharjah, Ras al-Khaimah	1.5 billion barrels
Crude Oil Quality	Light, Gravities 32°-44° API
Prime Exports	1. Abu Dhabi's Murban blend 39° 2. Dubai's Fateh blend 32° Japan (60%)
Chief Buyer	

Source: Emirates Industrial Bank



UAE Oil Production

mbd and Dhs. Billion

Year	Production	Revenue
1975	1.7	26.4
1980	1.7	70.8
1985	1.2	44.7
1990	2.1	54.5
1995	2.1	47.5
1997	2.2	52.0

Source: Emirates Industrial Bank

financial downturn, a warm winter in the northern hemisphere and a general excess of supply, resulted in a further drop in oil prices.

The UAE was of the opinion that raising OPEC's production ceiling played a psychological and not a direct role in the determination of oil prices because the Jakarta agreement simply sought to marry actual production with quota allocations, and it also tallied with average demand in the market at the time. Nevertheless, average demand had to be reviewed in the light of intervening factors. In March, the price for ADNOC's marker Murban crude was set at \$12.75, a fall of \$4.25 from the January price of \$17 per barrel.

OPEC members responded to the 40 per cent fall in prices over the previous October by agreeing to cuts of 1.245 mbpd in March 1998. As part of this agreement the UAE decided to cut its oil output by 125,000 bpd as from 1 April. Other major non-OPEC producers took the unprecedented step of co-operating with OPEC, pledging cuts to sacrifice 500,000 barrels per day on top of OPEC's reduction. The UAE welcomed this new spirit of co-operation and expressed its hope that oil producing countries would trim their crude production.

Prices for the UAE's four main grades of crude oil recovered slightly in May from the lows recorded in March. However, oil prices worldwide remained unsatisfactory, requiring renewed efforts for corrective action. Steadily-rising Iraqi oil exports under the UN oil-for-food deal contributed to the excess in supply. With prices stubbornly staying close to their lowest level in nine years, by June 1998 the UAE was calling for a further collective cut in output in an attempt to achieve a price of between \$18 and \$20 dollars a barrel.

Following a decision reached in early June by non-OPEC producers to make further cuts of 450,000 barrels per day, OPEC agreed to reduce production by 1.38 mbpd day on 24 June. The UAE's contribution amounted to a reduction of 75,000 bpd. The UAE played a vital role in the OPEC agreement and welcomed, in particular, the continued serious and fruitful co-operation between OPEC and non-OPEC producers to attain stability in the international oil market. Nevertheless, despite agreement on cuts, compliance among OPEC members is a cause of concern to a producer like the UAE which has regularly stuck to its quota. In addition, the oil market showed little signs of recovery. By September, Brent crude, a standard benchmark for international oil prices, was selling at \$12.56 a barrel. In real terms this price was only marginally better than the price prevailing in 1960 when OPEC was formed.

In the light of the volatility in the market, the UAE has renewed calls for a new pricing formula for crude oil, remarking that it is the right of producers to obtain a stable and reasonable price for the oil they pump. The oil price should not only be determined by production costs, but should also take into consideration that oil is not a renewable natural resource, it argues. A higher and 'just' price would not only mean higher profits for oil producers, but would also secure long-term supplies for consumer markets. In other words, a just price would mean that the pricing level would factor in the cost that producing countries would incur in further developing oil infrastructure, investment in new technology by international oil companies, and the need for consumer markets to secure supplies. This formula would be based on the need for all players in the international oil markets to share the burden of responsibility for stabilising the market.



Abu Dhabi

Abu Dhabi is by far the biggest oil producer in the UAE, controlling more than 85 per cent of the UAE's total oil output capacity and over 90 per cent of its crude reserves. The proven crude oil reserves of Abu Dhabi emirate are 92.2 billion barrels while those of natural gas are 188.4 trillion cubic feet. Abu Dhabi's offshore Khuff gas reservoirs hold some 90 per cent of the UAE's total gas reserves. Principal offshore oil fields are Umm Shaif, Lower Zakum, Upper Zakum, Al-Bunduq and Abu al-Bukhoosh. The main onshore fields are Bab, Asab and Bu Hasa.

Oil companies from Japan, France, Britain and other countries own up to 40 per cent of the energy sector in Abu Dhabi, the only Gulf oil producer to have retained foreign partners on a production-sharing basis. More than half of Abu Dhabi's oil production comes from the Abu Dhabi Company for Onshore Operations (ADCO), which is among the ten largest oil firms worldwide, and the largest crude oil producer in the southern Arabian Gulf. The second main producer is Abu Dhabi Marine Operating Company (ADMA-OPCO). The output of oil and gas from ADMA-OPCO fields is transported to its centre of operations on Das Island for processing, storage and export. Both ADCO and ADMA-OPCO are part of the Abu Dhabi National Oil Company (ADNOC) Group of Companies.

ADNOC, established in 1971, is a fully owned government company, controlled and supervised by the Supreme Petroleum Council (SPC), which is responsible for formulating Abu Dhabi petroleum policy and overseeing the emirate's oil and gas operations and related industry.



In addition to its own concession areas and operations, ADNOC has major shareholding in 15 ventures forming the ADNOC Group. These include the three main oil and gas operating companies (ADCO, ADMA-OPCO and ZADCO), five support companies providing services to the oil and gas industry, two natural gas processing companies (GASCO, ADGAS), two maritime transport companies for crude oil, refined product and LNG (ADNATCO, NGSCO), a refined product distribution company (ADNOC-FOD), and two chemical and petrochemical companies (FERTIL, BOROUGE). ADNOC also owns and operates two refineries at Umm al-Nar and Ruwais, the gas treatment plants at Habshan, gas pipeline distribution network and the chlorine industries at Umm al-Nar.

ADNOC was among the top international oil companies that showed impressive growth in 1997, moving up from twenty-first to eighteenth position in ranking worldwide. One of the reasons for its success is that its subsidiaries are frequently at the forefront with innovative technology. For example, ADNOC affiliate Zakum Development Company (ZADCO) is one of the leading companies in horizontal drilling in the Middle East. ZADCO drilled its hundredth horizontal well in 1997. With these new methods it is managing to produce increased volumes of petroleum (more than 500,000 bpd, compared to 300,000 bpd five years ago) from difficult strata on Upper Zakum, one of the world's largest offshore fields.

In line with its programme to invest in expansion of the energy sector, Abu Dhabi has also embarked on a major gas development programme to keep pace with rising domestic demand and maintain reservoir pressure at its main onshore oilfields. With local gas demand expected to double over the next five years, ADNOC and its affiliates have embarked on plans worth around Dh 9.18 billion (\$2.5 billion) to bring on new flows by the turn of the decade.

Gas production is being expanded to meet a forecast doubling of demand to 3.7 billion cubic feet per day (bn cfd) by 2000. Domestic demand (for feedstock for petrochemicals and for power generation and water desalination) is expected to increase from 813 million cubic feet per day (mn cfd) in 1996 to 11.37 bn cfd by 2000, while gas used for reinjection is projected to double to 1.8 bn cfd. About 540 mn cfd will be needed to supply Dubai from 2001. These figures do not include gas used in ADGAS's LNG plant for export to Japan, or gas injection in offshore fields.

The second phase of the Onshore Gas Development Project (OGD-2) is well underway. This involves the addition of three new trains at the Habshan gas processing plant and the construction of export pipelines from the site, as well as a smaller inter-field gas gathering network. OGD-2 will produce 1,000 mn cfd of dry gas for domestic consumption, 500 tpd of NGL, 50,000-100,000 bpd of condensate and 2,100 tpd of sulphur. The project value is estimate at \$1 billion. Gas will come from the Thamama C and D reservoirs in the Bab and Habshan fields. A third-phase development is under study.

The Asab Gas Development Project will recover condensate and reinject gas at the Thamama F and Thamama G gas reservoirs underlying the onshore Asab oilfield. Gas output will be boosted up to 850 mn cfd. Gas will be re-injected to ensure long-term productivity of the oilfield. Condensate output of some 100,000 bpd is expected. The project, which should be completed by 2000, has a projected cost of \$680 million.

The main offshore gas project is the Khuff/Taweelah Gas Development Project, which involves production of 550 mn cfd from the non-associated Khuff reservoir underlying the offshore Abu al-Bukhoosh and Umm Shaif oilfields and construction of a two-train, gas processing plant at Taweelah. Output of 900 mn cfd to 1 bn cfd is expected and the project value is estimated at \$800 million. The Taweelah plant will be linked to the Umm al-Nar refinery by pipeline and also to Dubai.

The natural gas agreement concluded in February 1998 between Abu Dhabi and Dubai for the supply of gas is a positive step towards continued co-operation between the two emirates. Over 800 million cubic metres of gas, from the Khuff gas field will be pumped daily via a 160-kilometre pipeline for processing at Al-Taweelah, where it will be separated. Light gas will be sent to Jebel Ali via another pipeline with a capacity of 1 billion cubic feet. The \$1 billion project is expected to supply Dubai with the feedstock it needs to fuel industrial growth in Jebel Ali for the next century.

ADGAS produces LNG and LPG at Das Island from offshore gasfields whilst GASCO produces LPG at Ruwais from onshore fields. Revenues from exports of liquefied gas have jumped from Dh 4.5 billion in 1990 to Dh 6.2 billion. The bulk of ADGAS's production of LNG and liquefied petroleum gas (LPG) is supplied to the Tokyo Electric Power Company (TEPCO) under long-term contracts. The latest contract was signed in 1994 and expires in 2019.

Other emirates

Dubai's oil reserves have fallen over the past decade and are expected to be exhausted within 20 years. Production declined to 240,000 bpd in 1997. The main fields are offshore: Fateh, Southwest Fateh and two smaller fields, Falah and Rashid. The only onshore deposit is the Margham field. Dubai Petroleum Company (DPC) is the main operator.

Dubai's Margham gas/condensate field can deliver up to 140 mn cfd for domestic use and offshore fields can provide another 100 mn cfd. Sharjah also supplies Dubai with 430 mn cfd through a pipeline installed in 1992. The state-owned Dubai Natural Gas Company (DUGAS) is responsible for processing natural gas produced in Dubai's offshore oil fields, as well as the gas piped from Sharjah.

Sharjah's offshore Mubarak field, operated by the local Crescent Petroleum Company, produces around 30,000 bpd of condensate. In November 1997 the Sharjah government awarded Crescent a 30-year exploration concession in the western offshore area. The onshore Sajaa and Moveyeid fields, operated by Amoco, produce 35,000 bpd of condensate, as well as gas. Sharjah's most important gas deposits are at the offshore Mubarak field and the onshore Saaja, Moveyeid, and recently-discovered Kahaif fields. Gas reserves are estimated at 10,000 billion cubic metres. Around 800 mn cfd of gas are produced.

Ras al-Khaimah's reserves are estimated at 400 million barrels of oil and condensate and 1,200 bn cfd of natural gas. In September 1997, Ras al-Khaimah awarded Norway's Atlantis Technology Services and Petroleum Geo Services a permit to explore the offshore Baih field. The Ras al-Khaimah Oil and Gas Company, set up in 1996, which has exclusive rights to the rest of the emirate, began drilling offshore in December 1997.



ADNOC's Umm al-Nar refinery.

Refineries

Development of downstream industries such as refineries and petrochemical plants is a central part of UAE efforts to move away from crude oil exports. Plans are under way to construct new refineries and increase the capacity of existing ones in order to attain production of 180,000 bpd by the year 2000.

Abu Dhabi is planning to spend \$2 billion on refining in the five-year period 1997–2002. ADNOC's \$600 million Ruwais refinery development plan for 1998 includes expansion of seawater intake capacity, pumping station and seawater out-fall from 2 million cubic metres per day to 4.5 million cubic metres per day, increase in the general utility desalination capacity from 35,000 to 65,000 cubic metres per day, and increase in the total installed electricity generation capacity from 170 megawatts to 700 megawatts.



Offshore Gas Development, Das Island.

The Ruwais refinery upgrading project is just one of the many downstream projects that are planned and underway in the UAE. Others include Metro Oil's 35,000 bpd refinery plant in Fujairah, the Emirates National Oil Company, ENOC's 60,000 bpd condensate refinery in Dubai, an 18,000 bpd gasoline plant in Jebel Ali Free Zone, and a new refinery project in Sharjah (SOR).

ENOC has entered into a \$170 million loan agreement with a consortium of four banks to finance its \$350 million condensate refinery in the Jebel Ali Free Zone (JAFZ). The project is expected to be completed during the first half of 1999. Phase I of the project will be the \$255 million infrastructure development of the facility and will include construction of the condensate refinery. The plant will be built on a 500,000 square metre site at JAFZ. This is Dubai's first processing and refining project. The plant, which will produce naphtha, jet fuel, diesel, marine diesel and liquefied petroleum gas, is being managed by ENOC Processing Company, a subsidiary of ENOC, which in turn is wholly owned by the government of Dubai.

The \$200 million Sharjah refinery project consists of three phases and is centred around the reassembly of three moth-balled refineries imported from various points in Canada.

SOR plans to use as feedstock Gulf crudes and condensates, converting them into a host of products from propane and butane through motor gasoline and jet fuel to gas oils, bunker C and asphalt. A new refinery of the SOR's size would have normally cost around \$600 million. By importing the dismantled refineries, the project has been able to save substantially on design and project management as well as large equipment purchase and labour.

Petrochemicals

As part of an ambitious plan to expand its energy sector, the UAE is planning to invest Dh 11 billion (\$3 billion) in petrochemicals in the next few years. It currently has two fertiliser plants with an annual capacity of nearly 2 million tonnes.

ADNOC is in the process of expanding its fertiliser plant, FERTIL. A record of 9,450 metric tonnes of bulk urea was loaded in a single day at FERTIL on 28 November 1997. Another milestone was achieved when 1,284 metric tonnes of ammonia was produced on 2 and 4 December, while on 5 December, some 1,886 metric tonnes of urea was produced. These represented 128.4 per cent and 125.7 per cent of design capacity respectively.

The official launch of Abu Dhabi Polyethylene Company Ltd (Borouge), ADNOC's petrochemicals joint venture with the Helsinki-based Borealis, took place in May 1998. The joint venture involves the establishment of a production company in Abu Dhabi and a separate marketing company in Singapore.

The new production company is owned 60:40 by ADNOC and Borealis respectively. Located in Ruwais, the polyethylene production complex will include a 600,000-tonne ethane-based cracker and two polyethylene plants, each with a capacity of 225,000 tonnes. The plants will be based on Borealis' proprietary Brostar PE technology and will produce both high-density and linear low-density polyethylene.

Besides the ethylene cracker plant, and two other identical plants with a capacity of 250,000 t/y each to produce polyethylene using the ethylene cracker, the remaining 150,000 t/y ethylene produced will be utilised by a 100 per cent ADNOC owned plant, to be also set up in the same complex, for producing ethylene di-chloride, the raw material for PVC. The three plants are expected to start production in early 2001, total investments are estimated to reach \$1 billion with an expected work force upon completion of 400 people, 350 based at Ruwais and 50 based in Abu Dhabi.

The marketing company, Borouge Ltd, which is owned 50:50 by ADNOC and Borealis, started pre-marketing in July 1998 with products produced by Borealis in Europe. As the bulk of Borouge's production is expected to be marketed in the Middle East and Asia, the marketing company will be based in Singapore. Borouge expect 80 per cent of their products to stay in the Middle East, African and Asian markets, with 20 per cent reaching Europe. Middle East and Africa sales will be handled by the Abu Dhabi branch office. Sales offices will be located in Bombay, Madras, Hong Kong, Shanghai, Beijing and a representative office will be in Tokyo.

The SPC has also approved another petrochemical project to produce 540,000 tonnes of ethylene di-chloride and 420,000 tonnes of caustic soda per year.



Marine transport

National Gas Shipping Company Ltd (NGSCO), an ADNOC company, provides shipping services to ADGAS and manages a fleet of eight specially constructed carriers designed for LNG/LPG transportation. Nineteen ninety-seven saw the first loading of 'Umm al Ashtan', the eighth vessel in the fleet.

Another ADNOC company, Abu Dhabi National Tanker Company (ADNATCO), owns and operates a fleet of eight crude/petroleum product tankers, a combined molten sulphur/petroleum product carrier and one crude oil storage tanker.

Dubai Shipping Company, a wholly-owned subsidiary of ENOC has signed a Dh 11 million (\$30 million) loan agreement to finance its tanker fleet expansion. The expansion is aimed at meeting the shipping needs of ENOC's condensate processing plant in Jebel Ali. The company is also planning to construct three new vessels.

INDUSTRIAL DEVELOPMENT

The UAE is eager to develop non-oil manufacturing in pursuit of its policy of economic diversification. Government strategy towards industrial growth over the next five years emphasises the importance of establishing high-technology, capital-intensive industries manufacturing high-value products, while protecting and maintaining the environment. Export-oriented and/or import substitution activities are favoured. Manufacturing, at present, contributes the highest share of all the non-oil sectors to the GDP (11.2 per cent in 1997) and is expanding rapidly.

By the end of 1997 the total number of industrial firms registered at the Industrial Development Department of the Ministry of Finance and Industry was 1,527, up from 1,261 establishments in 1995, with a total labour force of 129,289, and a total capital of Dh 13 billion.

Chemical, oil and plastic products topped the list with 312 firms (compared to 282 in 1996) and a capital of Dh 1.314 billion, representing 20.4 per cent of the total number of companies operating in the country. This was followed by the metallic products and equipment industry, capitalised at Dh 294 billion and representing 19.2 per cent of the total number of companies in the country. However, metallic products employed the largest number of workers, totalling 27,539, up from 24,449 in 1996.

Crude metals came in third position with 197 firms and a labour force of 15,905, followed by textile and leather products with 175 firms, up from 171 in 1996, with the number of workers rising from 24,875 to 26,939 and capital increasing from Dh 477 million to Dh 484 million. In fifth position were foodstuffs, soft drinks and tobacco companies, with 145 establishments representing 9.5 per cent of the total firms in the country employing 13,050 people, an average of 90 workers in each unit, and a total invested capital of Dh 1.453 billion.

The number of establishments involved in paper production, printing and publishing rose to 102 in 1997, from 95 in 1996. The industry is presently capitalised at Dh 834 million dirhams and has a workforce of 7,911 employees, up from 6,768 in 1996. Wood product establishments increased in number from 109 to 119, the number of workers rising to 6,953 from 5,668, with a capital of 159 million dirhams.

At the time of the recent survey, 539 companies were operating in Dubai, with 42,182 personnel and a capital of Dh 1.53 billion; Sharjah had 493 companies, with a workforce of 48,611, while 166 companies were located in Abu Dhabi, with 17,771 personnel and a capital of Dh 2.489 billion. Ajman supported 211 firms, with the total number of employees reaching 17,326, but with less capital at Dh 267 million. There were 90 companies in Ras al-Khaimah with a personnel quota of 1,226, while Umm al-Qaiwain had 28 firms with 1,020 employees and Fujairah had 24 firms with 1,153 employees.

The provision of superior facilities and attractive incentives in free zones (see Business Development) has been a major impetus to attracting foreign investment in industrial



development. The number of companies in Jebel Ali Free Zone, the biggest in the region, now stands at 1,300, including an impressive list of 'big name' manufacturing companies, such as Mitsubishi Heavy Industries, General Motors, Ciba Geigy, AEG, Aiwa and Daewoo. Exports from Jebel Ali are worth \$11 billion a year and are expected to rise to \$25 billion in the year 2000. Among the new projects which commenced in Jebel Ali in 1998 was the international food company Mars Incorporated's first stage of production and a plant for manufacturing batteries with an annual production capacity of 500,000 batteries.

A second free zone is under construction in Dubai as part of Dubai airport expansion. In addition, a business park, concentrating on light industry, is being developed by Dubai Investment Industrial Parks Company.

Abu Dhabi's major new free zone on Sadiyat island will incorporate bulk commodities trading. Sharjah, at present constructing its second zone at Hamriyah, accounts for a third of the UAE's manufacturing output, based mostly on textiles and leather goods. At the Fujairah zone, 40 per cent of the companies are involved in manufacturing. Ras al-Khaimah, Ajman and Umm al-Qaiwain also have free zones.

Besides free zones, each emirate has also developed a comprehensive infrastructure of regular industrial zones and is particularly keen to promote projects which add value to the industrial sector by manufacturing an import substitution product.

Bus manufacturing

The UAE's first bus manufacturing plant, and the first of its kind in the GCC region, which is due to enter production early in 1999 in Dubai's Al-Quoz area, will admirably fulfil the role of import substitution. A pioneering industrial venture, the sophisticated assembling facility featuring state-of-the-art technology is designed to produce a range of top-quality buses. Belhasa Group, the organisers of the Dh 30 million project, became the first local company to launch its own brand of passenger vehicles with the recent introduction of Trans Mark I Series of 77-seater buses, a cross-breed between Chinese technology and Indian engineering.

The aim of the high-tech bus assembly plant, covering an area of 52,000 square metres, is to cater to the needs of the local and regional mass transportation market, which has increased in tandem with the buoyant growth of the industrial and service sectors.

Currently, the UAE imports between 300 and 400 large buses, with seating capacities above 70, and over 300 medium buses every year to meet the requirements of schools, factories and construction companies. In addition to this, the demand for luxury coaches to ferry tourists on sight-seeing expeditions has risen dramatically in the wake of the boom in the tourism industry. There is also a new-found demand from the growing inter-emirates bus transport service.

Tyre manufacturing

The first tyre manufacturing company in the GCC is scheduled to start operations in Ajman's Jass Industrial Area in the year 2000. The project, entitled Etarat, will be a joint venture with the China-based Hunan Overseas International Co-operation which has affiliations with the Shanghai Rubber and Tyre Group.

Etarat is to start with a capital of Dh 150 million. While a substantial part of the capital requirements will be injected by the founders, the balance is being raised through an initial public offering in the UAE. Etarat will be one of the most high-technology plants of its kind in the world and will initially focus on manufacturing large tyres used on buses, trucks and other heavy duty vehicles, before diversifying into the passenger car segment. The manufacturing plant, sourced from rubber machinery makers in China and the UK, will initially produce 1 million sets of bias tyres per annum before the facility is upgraded to manufacture radial tyres. The potential for such a project in the GCC, where surface cargo transshipment and mass transit systems depend on heavy duty vehicles and cars, is great. The Ajman-produced tyres should also have a pricing edge, as they would enjoy an 8-10 per cent customs duty waiver in the GCC.

Fertilisers

The UAE is set to become self-sufficient in fertiliser products following the opening in June 1998 of the Abu Dhabi Fertiliser Industries Company (ADFERT) in Mussafah's industrial zone.

The new company is a joint venture between a local Abu Dhabi-based company – International Technical and Trading Company – and SQM of Chile, the company that

introduced the world to artificial fertilisers. The plant will manufacture granular and water-soluble chemical fertiliser for domestic consumption and also for export to other markets, mainly GCC member-states. Custom-made fertilisers suitable for individual soil composition will be supplied following soil analysis by ADFERT's sophisticated laboratory department.

The ADFERT plant will use only the finest and purest raw materials, and those most appropriate to the region's needs. The plant comes on line at a time when the UAE's agricultural sector is experiencing significant growth. Its high quality production, combined with an impressive output capacity, should enable it to supply all local needs, as well as to compete globally against existing products.

Other new industrial projects

SINA'AT (the Emirates Basic Industries Company), a share holding company with a capital of 1 billion dirhams, was established in July 1998 by the Dubai government in partnership with a group of about 100 founding businessmen. The company concentrates mainly on the production of chemicals, petrochemicals and other basic industries.

Dubai Investment Company announced on 4 January that it has signed a memo of understanding with the American company Konko for a feasibility study to establish the first factory for bituminous coal in the UAE. The cost of the project, which has a production capacity of 400,000 tonnes, will be in the region of \$120 million. Production is expected to start at the end of 1999.

The Emirates Glass Factory in Al-Quoz Industrial area in Dubai started production in March 1998. Established at a cost of 70 million dirhams, it has a capacity to produce 1.7 million square metres of normal, coloured and strengthened glass.

Work started in April 1998 at the steel plant in Mussafah, Abu Dhabi. The plant, which has a production capacity of 500,000 tonnes, was established by the General Corporation for Industries at a cost of \$100 million.

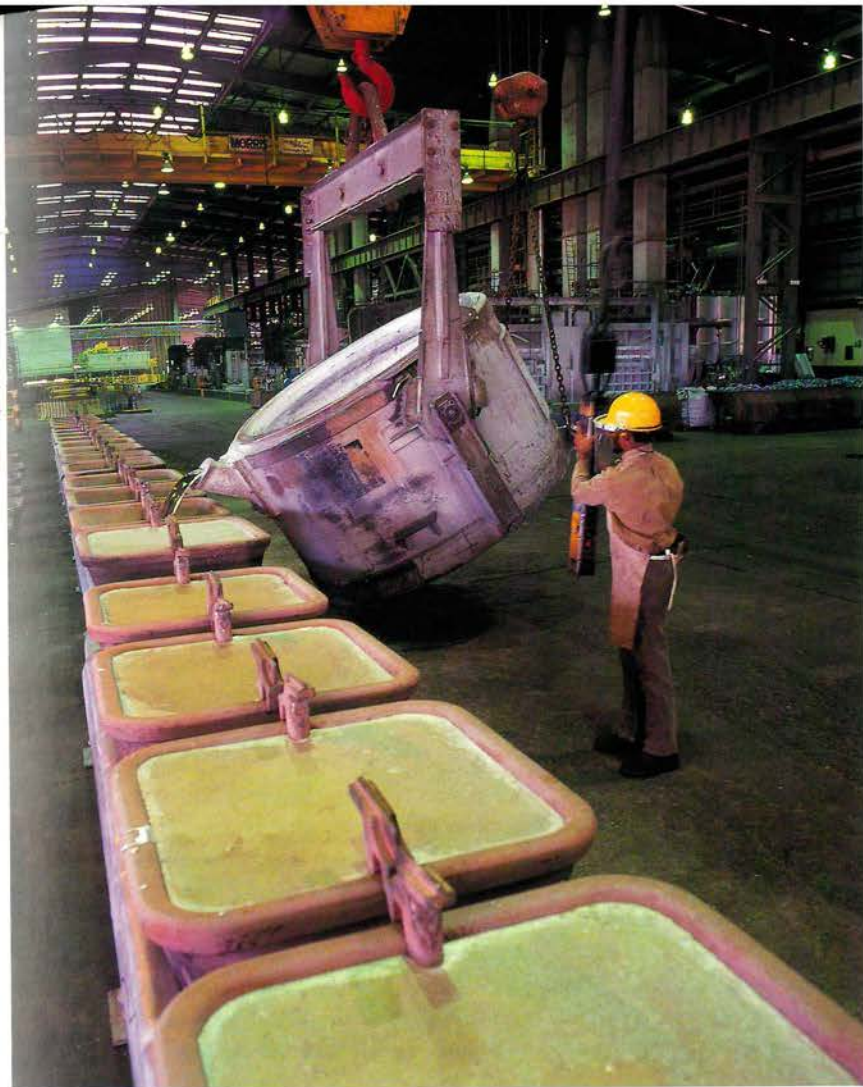
Emirates Cable Company, previously known as DUCAB, commenced its 140 million dirham expansion project in March 1998. In October 1996, Abu Dhabi government, through the Abu Dhabi General Industries Corporation, took a 35 per cent stake in DUCAB, 35 per cent is owned by the Dubai government and 30 per cent by the UK company BIC.

Abu Dhabi General Industries Corporation finished the first stage of the feasibility study to establish an aluminium smelter with a capacity of 220,000 tonnes annually. The Corporation has also modernised and expanded its existing facilities, i.e the Al Ain Cement factory, the Abu Dhabi flour factory and the Abu Dhabi Pipes and Plastic factory.

Aluminium

Aluminium manufacturing is a major industry in the UAE. Dubai Aluminium Company (DUBAL), owned by the Dubai government, has a turnover of Dh 2.57 billion (\$7 million) and accounts for about 2 per cent of world aluminium production capacity.

In 1997, DUBAL recorded the highest annual profit in its 18-year history and also achieved record-breaking results in sales revenue and production. The exceptional across-the-board performance was largely due to increased metal output following the commissioning of



DUBAL plant in Dubai.

its fifth potline. Sales revenue soared to Dh 2.5 billion in 1997 from Dh 1.8 billion in 1996. Nearly 400,000 tonnes of aluminium were sold in 1997, with hot metal production increasing by 46 per cent from 1996 and cast metal output up by 42 per cent.

DUBAL's financial performance has been strong since 1994, but the levels achieved in 1997 surpassed all previous records. Margins compared very favourably with industry giants such as ALCAN, ALCOA and Pechiney and it also posted a strong return on equity – nearly double the industry average of around 7 per cent – even after factoring in tax considerations.

DUBAL's production was increased due to expansion at the smelter, but the output from the new potline was greater than original estimates since it was commissioned earlier

and the new cells performed better than expected. Revenues were above target because sales of its higher value added product were maximised and because aluminium prices remained relatively buoyant throughout the year. DUBAL was also able to bring costs below budget despite increasing raw material prices.

The company logged several other significant achievements in 1997 besides the operational, sales and financial milestones. The company's desalination plant received ISO 9002 certification in July. DUBAL's entire smelter operation was also re-certified to the same ISO 9002 international quality standard for the fourth consecutive year.

Nineteen ninety-seven saw the commissioning of a new test cell, which will take the CD200 reduction cell jointly developed by DUBAL and COMALCO of Australia to the next level. The new cell, which operates at 260 kA, may be one of the best of its kind in the marketplace. The CD200 cell has already surpassed expectations in Potline 5 and the next generation, called CD26, is expected to perform equally well.

At the beginning of 1998 economic turmoil in its most important market, Asia, forced DUBAL to re-direct some 25 per cent of its Asian sales to Europe, the Mediterranean and the United States. Of the almost 400,000 tonnes DUBAL produces annually, around 270,000 tonnes (approximately 70 per cent) normally goes to Asia – mainly Japan, South Korea, Taiwan, Indonesia, Thailand, the Philippines and China. A large part of the sales are to the motor industry. Aluminium exports to Asia are likely to be in the region of 170,000 tonnes in 1998.

Fortunately for DUBAL the US market continued to be strong and sales to Turkey, Lebanon, the UK, Germany and Italy were increased. Export to Europe is expected to be in the region of 75,000 tonnes, up from 15,000 tonnes last year. Nevertheless, the re-directed trade was not without cost. DUBAL had to face a 6 per cent tariff on imports into Europe (approximately \$100 per tonne) and the additional logistical costs to the US. EU currently imports 2.8 million tonnes of aluminium, of which 1.7 million tonnes are exempted from the 6 per cent tariff. DUBAL has been particularly vociferous about the lack of equal market access in Europe, particularly since it has come to light that some companies are rerouting their product to avail of the exemption.

In February 1998, DUBAL announced detail of its 'Condor' sixth potline project, which will establish it as the largest smelter in the region and one of the largest aluminium smelting plants in the world, with a capacity exceeding 525,000 tonnes per year when commissioned in 1999. Four hundred new employees are to join DUBAL in 1998, to enable the company to cope with the expansion.

DUBAL signed a \$150 million loan agreement with Barclays Bank in July 1998 to part finance its \$725 million expansion project. The company is seeking a total \$500 million external debt financing for the project, aimed at increasing the plant's capacity by 35 per cent to 525,000 tonnes. While \$270 million will be raised through banks, including another \$120 million with the involvement of five other banks, DUBAL intends to mobilise the rest, amounting to more than \$200 million, through a bond issue. Barclays Bank will also provide DUBAL with a \$40 million revolving credit facility to ensure cash flow and short term working capital.



Julphar Pharmaceutical plant.

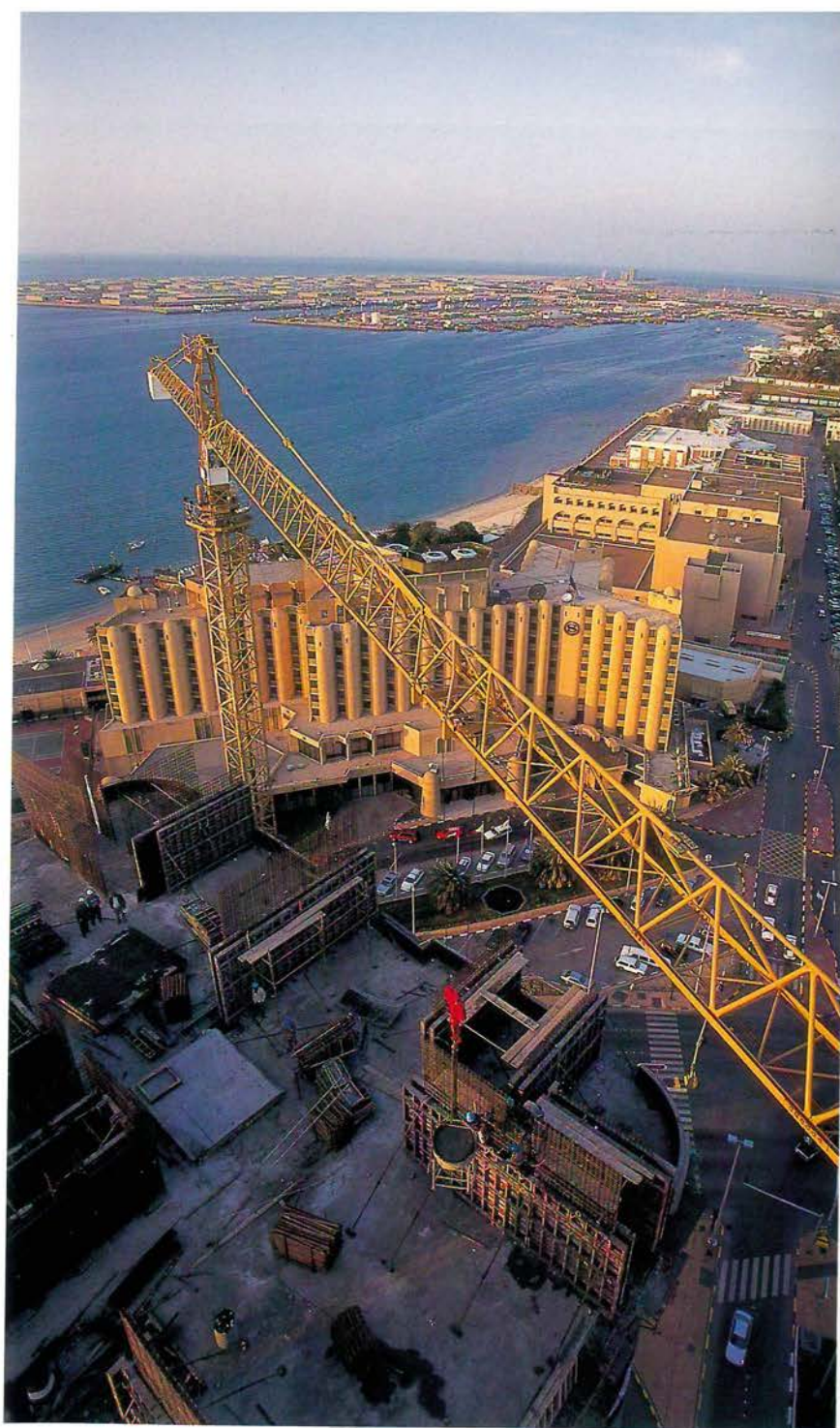
Pharmaceuticals

The market for prescription drugs in the UAE is in the region of \$150 million. At present 75 per cent of UAE's pharmaceuticals are imported, the sole pharmaceutical manufacturing facility, Julphar, operating from Ras al-Khaimah. However, this will soon change since two new pharmaceutical plants are in the pipeline.

The first, Emipharma, an Abu Dhabi joint venture which will produce anti-addiction drugs, is capitalised at Dh 6.23 million, with total project costs estimated at Dh 11 million during the first phase. Production at Emipharma's unit in Mussafah, which will be commissioned at the end of 1998, will begin with 300 million tablets and 70 million capsules in the first year of operation. Capacity will be diversified to produce liquid oral medications and ointments during the second phase expansion and injectables during the third year.

Nearly 17 per cent of initial output will be sold locally and the rest will be shipped to Moscow, where one of the partners, Saxena, operates a trading and distribution subsidiary. Interests in other markets, including the GCC, will be developed when Abu Dhabi operations are well underway.

As a first step in this direction, Saxena has set up a wholly-owned re-packaging unit at the Sharjah Airport International Free Zone, with a paid up capital of Dh 3 million. A distribution division has also been set up in Ajman to market paramedical equipment for other manufacturers, alongside its own drugs.



Another pharmaceutical plant, Globalpharma, a Dh 52 million venture, is being established by Dubai Investments to produce and market a range of antibiotics, anti-ulcerants and cardiovascular drugs in the GCC and beyond. The plant will be the first in the region to produce the raw materials for its product formulations which will be marketed world-wide. The project is a joint venture with Kopran, an Indian health care company. The new facility will be set up on a 30,000 square metre plot in the Dubai Investments Business Park, and commercial production will commence in January 2000.

The company initially planned a range of 65 products, with emphasis on antibiotics and cardiovasculars, representing 36 per cent of the GCC market. The company expects its local market share to climb from a modest 3 per cent in the first year to around 9 per cent of the Gulf market by the fifth year. In-house raw material manufacturing capabilities will assure product integrity while honing the edge on cost competitiveness.

Kopran is a \$100 million company whose products are exported to over 50 countries. It also has subsidiaries in the UK, Hong Kong, China and Africa, and tie-ups with firms in Germany and the US.

Cement

The building boom of yesteryear has been replaced by a more sedate but steady rate of growth in the construction industry. This has had an impact on cement manufacturing, prompting some speculation that the market may be over-supplied. Currently, there are ten cement factories in the UAE with a total output of around 5 million tonnes per annum, while the installed capacity is around 8 million tonnes per annum. Two new plants are in the offing, the first being a Dh 33 million unit of 500,000 tonnes per annum capacity in Jebel Ali and the second, to cost more than Dh 155 million, to be based in Ras al-Khaimah.

Shipbuilding

The United Arab Shipping Company (UASC) was founded in 1976 with an authorised capital of \$1.77 billion by six shareholding states from the Arabian Gulf region, the UAE's stake being 19.8 per cent. UASC has contracted with a Japanese consortium of three shipyards for the acquisition of ten new ships to modernise its fleet of container ships, in an effort to expand global trade routes and provide a wider service network. The consortium, comprised of Kawasaki, Mitsubishi and Mitsui, are building the identical ships at a cost of \$67 million each, with an overall length of 276.5 metres, a service speed of 24 knots, a capacity of 3,802 TEU and a gross tonnage of 49,993. All are to be delivered throughout 1998, the first having arrived in March 1998.

With the acquisition of the ten new vessels, the total fleet strength of UASC will rise to 56, fortifying further its claim to be the largest ocean carrier of dry cargo in the Middle East. The UASC has successfully expanded its container services into global routes spanning over northern Europe, the Mediterranean, the Far East, South and North America, South Africa and the Indian sub-continent.

As the national line of the Arabian Gulf states, the UASC's primary mission is to serve the shipping needs of the region and the company offers more services to the Arabian

Gulf and Red Sea sectors than any other shipping line. The company has also diversified through its subsidiaries and joint ventures to provide a range of shipping-related services, covering the wide gamut of shipping agencies, freight forwarding, land transportation, sea and air cargo, petrochemical transportation, chartering, container repairs and storage.

The UAE Navy has taken delivery of the first of six German-built TNC-45 missile patrol boats being refurbished by Abu Dhabi Ship Building (ADSB) under a Dh 300 million, four-year contract.

The vessel, 'Baniyas', has undergone a complex overhaul in which most of its machinery and equipment were completely removed and replaced with new or upgraded materials. Much of the ship's hull and decks were also replaced with new steel. The delivery of the 'Baniyas' represents ADSB's most significant job since being established in 1995. Last year it delivered two newly-constructed 20-metre fire fighting tugs to the Navy.

In 1997, ADSB signed a letter of intent with the Navy for the development and installation of an automated integrated logistics system to be implemented in 1998. ADSB is also in the running for a large, four-ship construction project planned by a local company, which would represent its first large-scale entry into the commercial ship-building business.

However, these achievements will be overshadowed when ADSB builds its planned massive new Dh 440 million complex, which will enable it to produce medium-sized naval and small commercial vessels. Its recently completed masterplan calls for a 1 million square metre facility in Musaffah, to become operational by mid-2000. This will allow ADSB to drastically increase the size of ships that it can handle. Its existing facility has a travel lift, which can lift vessels of 500 tonnes, but the new complex would include a ship-lifting system able to cope with ships of up to 5,500 tonnes. That would give ADSB the ability to handle all UAE Navy vessels, existing and planned: it has already been officially selected as the builder of the majority of ships the Navy expects to acquire. The new complex will thus make ADSB the Middle East's first full-fledged manufacturer of naval craft.

The expansion would also give it the capability to repair, refit and build bigger ships for other GCC navies, and to refurbish commercial ships and oil tankers owned by ADNOC. ADNOC owns 18.5 per cent of ADSC, 40 per cent belongs to Newport News Shipbuilding, while 41.5 per cent of the company was sold to UAE nationals in its October 1996 public offering.

Aviation industry

The regional airline, Gulf Air, owned by the governments of Abu Dhabi, Bahrain, Oman and Qatar, continues to improve its performance. Reductions in fixed costs and continued progress on the restructuring programme were cited as prime factors in pushing Gulf Air back into profitability in 1997. Gulf Air's commercial success in 1997 is highlighted by strong revenue performance despite a substantial reduction in capacity. While scaling down operations by 15 per cent as far as routes were concerned, only 1.7 per cent of revenue and 3 per cent in passenger numbers were lost, representing a substantial increase in business on existing routes.





New financing has also enabled Gulf Air to expand its fleet. A \$550 million order for six new Airbus A330-300s is being filled. Four of the aircraft having been delivered in 1998, the remainder will arrive by 2001. Abu Dhabi's new leasing company, Oasis, is also negotiating to buy the New Zealand-based leasing company, Ansett Worldwide Aviation Services, which has 38 aircraft that could be leased to Gulf Air.

Emirates Airline, owned by Dubai, has continued to prosper. Emirates has won more than 160 major international awards, including the 1998 Best Airline award in the UK newspaper *The Observer's* readership poll. The airline now serves 45 destinations in 37 countries with a fleet of seven Boeing 777s and 15 Airbus aircraft.

In April 1998, Emirates acquired a 40 per cent stake in Sri Lanka's carrier, Air Lanka. Emirates also signed a \$56 million contract with Japan's Matsushita Avionics Systems Corporation in April for the installation of in-flight entertainment and telecoms systems. The airline is due to take delivery of two Boeing 777s by the end of 1998 and 16 Airbus A330-200s during 1999-2002.

Aircraft servicing and repair has also become a thriving industry in the UAE. GAMCO, the Abu Dhabi-based Gulf Aircraft Maintenance Company, provides a one-stop maintenance base for L1011. In 1998, Air Atlanta Icelandic awarded it a maintenance contract for seven Lockheed L0100 aircraft, spread over the year. The first aircraft arrived at GAMCO in early January.

The company was also awarded a contract from British Aerospace, BAe, (Aviation Services) for the maintenance of two Airbus A 310 aircraft. The work includes complete cabin interior refurbishment and modifications, 'A' Check maintenance, performance of Airbus Service Bulletins and other defect rectifications.

A fourth aircraft from the Turkish Airline, Onus Air, A320, also received a 'C' Check and five-year maintenance check at GAMCO. This aircraft, which is owned by the International Lease and Finance Company, will be leased to Lotus Air at the end of service checks and ratifications. Lotus Air, a new, Cairo-based passenger airline, has signed a general terms agreement with GAMCO for 'A' Checks, maintenance support and ad-hoc services.

Gold industry

The steady fall in gold prices has given an enormous boost to the gold product market (jewellery, coins, bars etc.). Consequent to the fall in price, world demand for gold in 1997 rose by 9 per cent. In GCC countries demand rose by 21 per cent in 1997. This rise is of considerable importance to the UAE, which is home to the largest gold trade centre in the Gulf, the gold trade being a major cornerstone of the country's trading activity (the others are electronics and textiles).

The astonishing growth in gold imports to the UAE has been almost entirely because of increasing demand in the domestic jewellery industry. Expansion has taken place with the fall in gold prices, but there has also been a qualitative change in favour of applying more sophisticated techniques. With support from the World Gold Council, Dubai, the industry has also improved its marketing, distribution, advertising and promotion efforts (e.g. the City of Gold promotion in 1997).

Gold jewellery is manufactured in the UAE by 37 modern factory units employing more than ten persons each and 175 artisan type workshops. The latter, although more numerous, account for less than 17 per cent of production. Prices in UAE are somewhat lower than in the rest of the Gulf countries because of the localisation of trade in Dubai leading to a large number of firms and consequent intense competition, as well as the predominance of machine production as opposed to labour intensive artisan production.

Although most of the imported gold is converted into jewellery, some is exported in 24 carat bars and coins (investment). Demand for jewellery is mostly for 22 carat. Only 10 per cent of the jewellery sold is 14-18 carats.

Bulk gold imports are not taxed in the UAE as it forms a raw material for further production. Finished jewellery imports are taxed at the standard rate of 4 per cent. The purchase of domestically produced jewellery does not attract taxes in the Emirates, making UAE-made jewellery highly price-competitive.



Gold Demand in UAE kilograms

1991	153,400
1992	284,400
1993	227,910
1994	257,910
1995	318,033
1996	350,479
1997	660,300

Source: World Gold Council Dubai

Switzerland, UK and South Africa account for about 97 per cent of the gold imported in the UAE. At present all gold is refined before importation. As the UAE's importance increases in the world gold trade, it is conceivable that some of the refinery activity will shift there, closer to a major market and with abundant energy resources.

TRADE

Its geographical location has made the Emirates a natural stepping stone for commerce between East and West. With this in mind, the country has sought to capitalise on its long trading tradition and facilitate contemporary trade with the creation of free zones and some of the most modern port facilities available worldwide. These developments have made a significant impact on trading patterns over the years, with statistics showing that the UAE has one of the highest foreign trade growth rates in the world.

A quantum jump of 20 per cent was made in 1991 in the ratio of imports versus GDP, a turning point in the economy. In the following years, imports have increased at such a pace that more than half of GDP is spent on the import of merchandise goods alone. A look back at the trend shows that imports expanded very rapidly in the 1970s but showed a downward trend in the early 1980s after a peak in 1981. In the recessionary climate of the mid-1980s, from 1985–1987, imports were affected by a reduction in spending by government and consumers alike. However, total imports doubled between 1988 and 1992. This major spurt was due to the expansion in economic activity. Nevertheless, in real terms, there have been periods of constancy and decline. More recently, the average growth rate has been moderate, most of which is accounted for by inflation in the world market. Since 1994, the rise in imports in real terms seems to have halted.

In 1997, the value of total imports (including free-zone imports and estimates of imports of the various emirates) dropped to Dh 93.9 billion, against Dh 94.8 billion in 1996 (0.9 per cent). This slight decrease was the first since 1987. Free-zone imports continued their annual increase, rising from Dh 10.8 billion in 1996 to Dh 11.5 billion in 1997. The volume



Port Rashid.

of imports in 1997 rose by nearly 10 per cent above 1996 levels. This mainly resulted from the appreciation of the UAE dirham against most major currencies, with the exception of sterling, and the drop of the world trade prices deflator from -1.4 per cent in 1996 to -4.8 per cent in 1997.

Consumer goods accounted for 53.1 per cent of total imports in 1997, while capital goods maintained their share of 36.3 per cent for the second consecutive year. Imports from Asian countries in 1997 maintained the same level recorded in 1996 at 45.4 per cent of total imports. Imports from European countries rose from 33.3 per cent in 1996 to 34.5 per cent in 1997, at the expense of imports from American countries, which dropped to 11.2 per cent in 1997, against 12.8 per cent in 1996. Meanwhile, imports from Arab countries increased, constituting 6.5 per cent of total imports.

Preliminary estimates of the trade balance indicate a surplus of Dh 27.1 billion in 1997, a drop of 4.8 per cent below the surplus achieved in 1996. This has occurred despite a decline in the value of oil exports from Dh 51.7 billion in 1996 to Dh 49.1 billion in 1997 (-5 per cent), resulting from the fall of oil prices by 4.6 per cent during 1997, compared to 1996, as well as the country's adherence to its set production quota.

The decline in the value of exports of liquefied gas from Dh 7.7 billion in 1996 to Dh 6 billion in 1997 was attributable to the fall in prices, which coincided with the decline in oil prices, and to the fact that the value of liquefied gas exports included a one time payment of Dh 1.5 billion made to ADGAS by Tokyo Electricity Company, the main importer of the company's gas.

Trade

In Billions of AED's

	1995	1996	1997
Trade balance	21.5	28.5	27.14
Oil Exports	44.6	51.7	49.1
Gas Exports		7.7	6.0
Total other exports	22.59	26.53	28.86
Free Zone exports	8.72	11.64	13.31
Other exports	13.87	14.89	15.55
Total exports & re-exports	107.7	123.3	121.08
Total re-exports		37.40	37.12
Imports	86.2	94.8	93.94
Free Zone imports	8.40	10.83	11.45
Other imports	77.80	84.00	82.49

Source: Central Bank of UAE

On the other hand, the value of commodity exports (free-zone exports, commodity exports from various emirates and petroleum products exports) rose from Dh 26.5 billion in 1996, to Dh 28.9 billion in 1997 (8.8 per cent), as free-zone exports continued to grow, reaching Dh 13.3 billion in 1997, against Dh 11.6 billion in 1996.

Despite the achievements of recent years, external factors will probably lead to a further drop in the UAE's trade surplus in 1998, due to a fall in the value of exports and a sustained growth in imports. However, a turnaround is expected by 1999 in the event of an oil price recovery. Experts are predicting that the trade surplus could rise to Dh 11 billion in 1999 on higher export earnings if oil prices exceed \$15 per barrel. The higher value of the local currency, which ensures cheaper imports, will also help spur the overall trade surplus in 1999.

While the value of oil exports is set to drop an estimated 25 per cent in 1998, overall exports in 1998 are expected to register a decline of only 6.1 per cent to an estimated Dh 118.5 billion, signifying the persistent buoyancy of the country's non-oil trade, offsetting the oil sector shortfall. It is expected that a slight growth in oil output, coupled with a price increase to an average \$15 per barrel, should enable oil revenues to increase in 1999, propelling the total value of exports higher. Non-oil exports and re-exports are also expected to grow in 1999. Total exports, including oil, are expected to increase from an estimated Dh 118.5 billion in 1998 to Dh 127.7 billion in 1999. Imports are projected to increase from an estimated Dh 106.43 billion in 1998 to Dh 113.77 billion in 1999, up 6.9 per cent.

Despite uncertainties on other fronts, the continuing weakness exhibited by major Asian currencies against the dollar bodes well for the UAE's medium-term trade prospects. The exchange rate situation is expected to make re-exports from the Emirates significantly cheaper, which will help UAE traders to expand some of their markets, particularly for Asian-made consumer goods.

Import duty

The UAE has chosen an import duty ceiling of 15 per cent for tax on industrial products under its WTO membership pact. This will give it flexibility in future if it wants to raise taxes from the current level of 4 per cent. Under WTO membership, countries specify future upper limits for tariffs. The UAE is among the few countries which has a much higher future tax ceiling. Most countries that already have high tax rates are opting for lower ceilings.

The UAE's exports of petrochemicals and chemicals will benefit from the new duty rates (0 per cent – 6.5 per cent) through extensive reductions by developed countries. Exports of garments for the period 1995–2000 will also show an increase between the years 1995 and 2000 as a result of improved quotas.

Customs tariffs

GCC states do not impose customs duties on goods from member states where local raw materials and services contribute 40 per cent of the added value. The product is subject to tariffs if the local contribution falls below this figure. Despite several rounds of talks over the past few years, the GCC remains split on proposals to reduce the requisite percentage of national contribution to 30 per cent, in a bid to increase trade among member states and contribute to efforts to set up a common market. GCC states are yet to reach agreement over the calculation of the added value in a large number of manufacturing facilities. In addition, the six members are negotiating a unified tariff on foreign products as part of plans to set up a customs union, which is essential for the creation of a Gulf common market in line with an economic pact signed in 1983.



Progress has been made in the classification of more than 1,000 imported products that could be taxed or exempted. Duties on foreign imports vary widely in the GCC, with Saudi Arabia and Bahrain imposing high tariffs and the UAE maintaining a relatively low tax. Other members have low taxes but levy higher duties on selected products. Officials have spoken of a compromise of between 8 per cent and 10 per cent, envisaging the creation of a fund to collect tariff revenues and compensate members affected by lower customs.



Harbour Master, Mina Zayed, Abu Dhabi.

Standardised customs procedures

In line with trends in the GCC and the rest of the world, a committee representing all seven UAE customs departments began working on the unification of customs procedures, including documentation, early in 1998. Unified customs procedures will facilitate transactions for companies that must now go through different procedures in each emirate. They will also ensure that companies do not take advantage of loopholes that may exist in the customs procedures of any particular emirate.

Tax on cigarettes

The new tax on cigarettes will increase customs revenues by 85 per cent, from Dh 111 million in 1997 to Dh 205 million in 1998. Following the implementation of Federal Law No. 2 for 1998, tobacco tax increased from 50 per cent to 70 per cent at the beginning of April 1998, with a minimum of Dh 56 on every 1,000 cigarettes. The law stipulates that the tax will increase to 80 per cent in July, with a minimum revenue of Dh 64 per 1,000 cigarettes, and then to 90 per cent in July 1999, with a minimum of Dh 72 per 1,000 cigarettes, and finally to 100 per cent in July 2000, with a minimum of Dh 80 per 1,000 cigarettes. Tobacco tax revenues are forecasted to increase to Dh 272 million in 1999 and to Dh 303 million in the year 2000.

TOURISM

An unbeatable combination of ever-present sun, warm seas, pristine sandy beaches, fantastic shopping opportunities, dramatic scenery, the chance to explore a unique desert environment, superb hotel and leisure facilities, virtually crime-free surroundings, a

fascinating cultural heritage, as well as the warmth and hospitality of its people, have made the UAE an up and coming tourist destination. The country has also invested considerably in tourism-related events such as sports and shopping spectacles, and built state-of-the-art trade centres encouraging business visitors to attend an ever-increasing number of conferences and trade shows. In addition, more and more visitor attractions are being built each year, from interpretative cultural and wildlife museums (see Heritage and Culture) to fun-filled water parks. As a result, tourism is making a significant contribution to the diversification programme, having become one of the most important economic sectors in terms of growth.

Hotel revenues in the Emirates rose to Dh 2.98 billion (\$810 million) in 1997, an increase of 9.5 per cent on the previous year. Despite this impressive growth, the number of European tourists visiting the UAE actually dropped in 1997 to 787,395 from 978,962 in 1996, partially due to a decline in visitors from the former Soviet Union. This was offset to some extent by a rise in visitors from Arab states, including those from neighbouring Gulf countries from 869,299 in 1996 to 937,717 in 1997.

The number of hotel rooms increased from 21,630 in 1996 to 23,170 in 1997, an increase of 7 per cent, whilst the number of hotel beds increased from 36,639 to 39,052 in the same period, an increase of 6.6 per cent. The average number of bed nights rose from 2.7 in 1996 to 2.8 in 1997. The total number of hotels in 1997 was 323. Luxury hotels accounted for 37.45 per cent of the total guests. Income from luxury hotels stood at Dh 1,971 billion, 66 per cent of total revenues.

Tourism organisations in the individual emirates actively market their own special attractions, frequently attending at international holiday fairs, as well as encouraging travel agents and tour operators to visit the UAE to experience its unique charms for themselves. The rich seam of Arabian life, dhows, spice souks, deserts, camels, mosques, gold souks and wind-towers give visitors something extra to experience after a hectic day negotiating at a trade show, playing a game of golf at one of the country's numerous world-class courses, or dabbling in the vast array of water sports on offer.

Hotels

	1996	1997
Luxury Hotels	42	47
Five Star Hotels	70	79
Four Star Hotels	55	60
Three Star Hotels	137	137
Total	304	323

Average annual growth in tourism in the Emirate of Abu Dhabi is about 15–20 per cent. In 1997, 70 per cent of tourists were from Germany, the remainder being from other western countries. Business related visitors have been particularly important to the Abu Dhabi hotel trade, especially during major conferences and trade shows, at which times hotel occupancy rates can reach 100 per cent. Most leading hotels have an average occupancy rate of between 70–85 per cent. In 1997, three new hotels, the Abu Dhabi Holiday Inn Crowne Plaza, the Majestic Hotel and the Abu Dhabi Radisson SAS, were opened to cater for the growing number of tourists and the influx of businessmen.

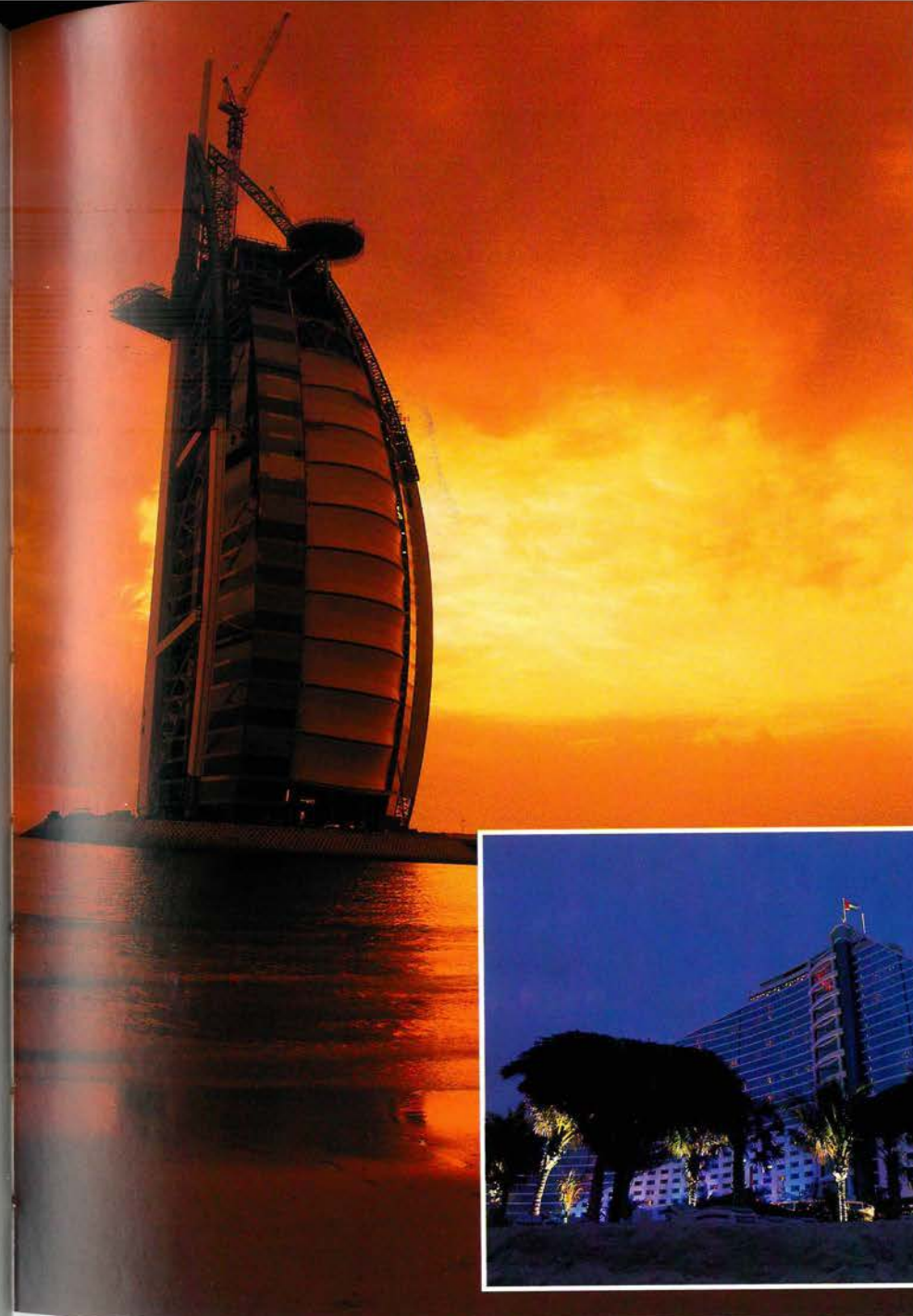
The newly-formed National Corporation for Tourism and Hotels (NCT&H), 20 per cent of which is owned by the Abu Dhabi government and 80 per cent by national shareholders, expects to play a major role in the development of tourism in Abu Dhabi. Besides the acquisition and management of hotels, NCT&H will become involved in transportation, tour operation and infrastructure-based projects. The main purpose in forming the company has been to revitalise the emirate's tourism and hotel industry and introduce 'healthy competition' for Abu Dhabi National Hotels Corporation.

A number of new tourism-related projects are under construction. One of the largest private projects in the emirate, a multi-storey complex costing Dh 1 billion that will house commercial, residential and recreational facilities, the Abu Dhabi Trade Centre will consist of four 20-storey towers constructed next to the Beach Hotel in the Tourist Club area.

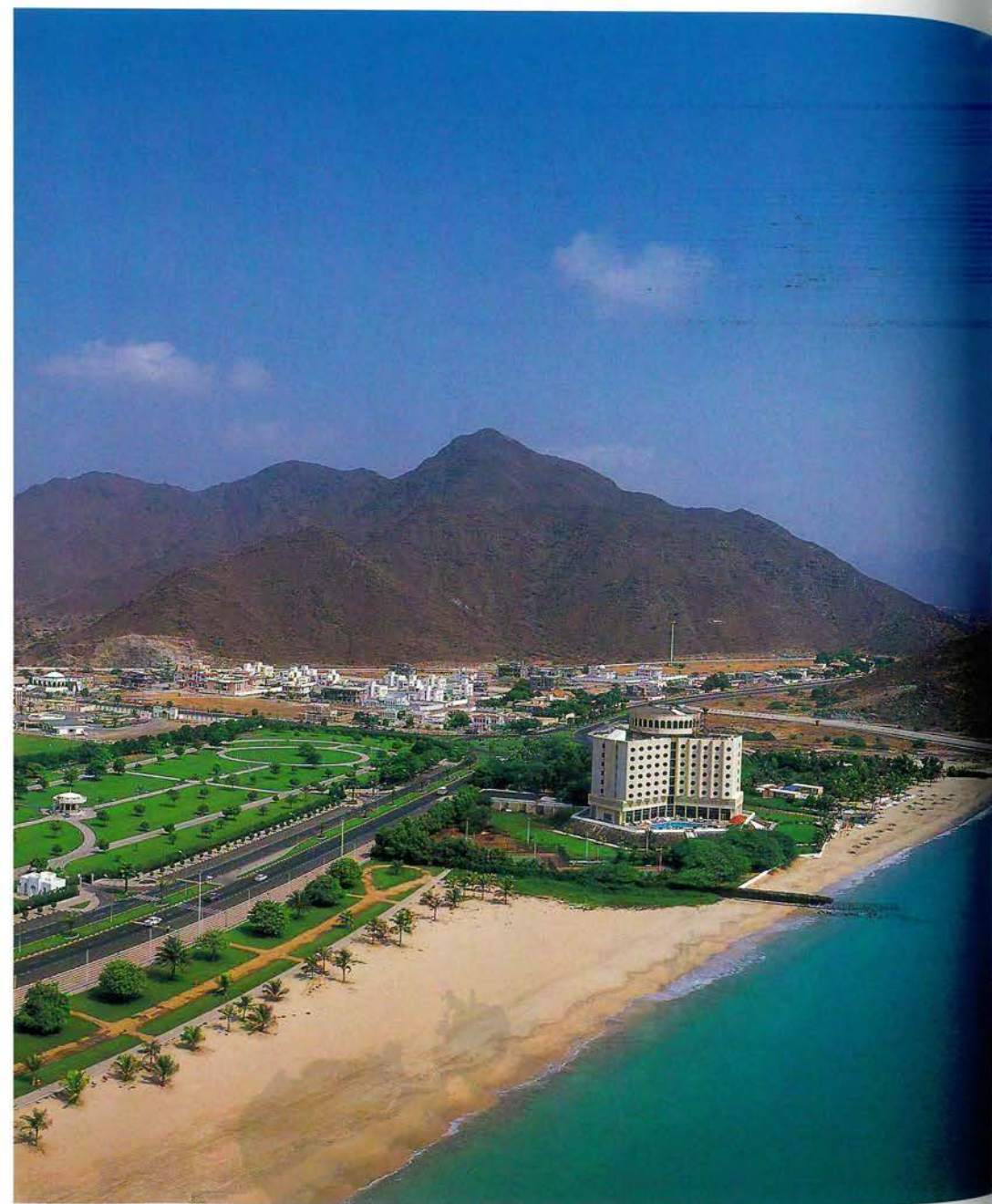
Abu Dhabi National Hotels Corporation is also building two new hotels and a shopping centre, cinema and entertainment complex on the new breakwater as part of the multi-million dirham breakwater development project. The prestigious Abu Dhabi International Marine Sports Club building, which is also part of the breakwater plan, was completed in October. This Dh 7 million project, covering 3,000 square metres, a fine blend of modern and traditional Gulf architecture, incorporates seven sails, representing all the emirates. The Club will host the finals of the Formula One Powerboat Racing World Championship, held in December every year.

Another important feature of Abu Dhabi's tourism development is the plan to transform Lulu Island, just off Abu Dhabi city, into a major theme park (see Urban Development). In addition, Al Ain and Dalma island, located around 180 kilometres west of Abu Dhabi, are being redeveloped as regional tourist attractions.

A highly significant development in the non-oil sector in Dubai has been the emergence of tourism as the most rapidly-growing economic activity. The number of operating hotels in Dubai rose from 233 in 1996 to 246 in 1997. Room numbers reached 14,223, with an occupancy rate of 64.8 per cent. The highest rate of occupancy, of 79.5 per cent, was reached during the Dubai Shopping Festival (DSF) '97. All in all, some 1.792 million guests spent an average of 4.532 nights in Dubai's hotels. Among the most prominent developments is the new Jumeirah Beach Resort, comprising two new hotels. One, constructed on an artificial island, is a 321-metre sail-shaped structure, the Middle East's tallest building. The other wave-shaped hotel is built on adjacent land. Dubai is also planning a 120-hectare theme park called Magic World, which is due for completion by 2001.

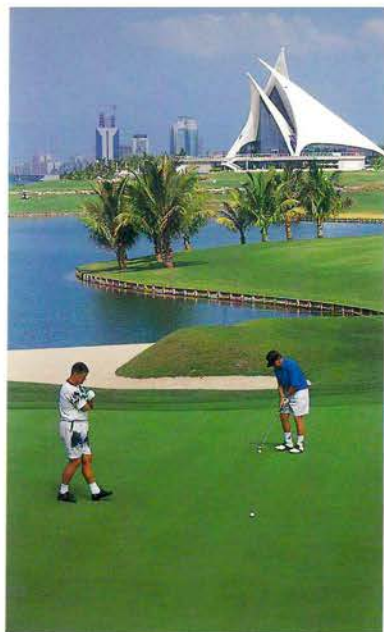


Jumeirah Beach Tower and Jumeirah Beach Hotel.



Khor Fakkan.





Dubai Creek Golf and Yacht Club.



Naomi Campbell opening the Fashion Cafe, Dubai.

Events such as golf and tennis tournaments, horse-racing, grandprix motor, yacht and powerboat racing, as well as the Dubai Shopping Festival attract large numbers of visitors to Dubai.

The Fujairah Tourism Bureau was established in 1996 to market the emirate's considerable tourist attractions, which include such diverse activities as watching bloodless bull wrestling, visiting mangrove forests and bird-breeding sites, or navigating the steep mountain roads and narrow gorges of the Musandam peninsula.

Infrastructure and tourism-related facilities are being built along the northern Fujairah coastline between Al Faqit and Al Aqqah, just south of Dibba, in a bid to develop tourism in the area. At present, the dual-lane highway up the East Coast ends at Khor Fakkan.

The area between Al Faqit and Al Aqqah is already a popular weekend destination for holidaymakers, thanks to its long beaches, while the shallow offshore waters around an island known affectionately as 'Snoopy Rock' are also popular among scuba divers.

Fujairah's marine environment, a considerable tourist attraction in itself, received a major boost when Fujairah's Ruler Sheikh Hamad bin Mohammed Al Sharqi declared three areas offshore as marine nature reserves, the first underwater habitats to receive such protection.

Plans for the coastline south of Dibba complement other developments recently announced for the promotion of tourism on the East Coast, among them a new hotel in Fujairah city. Other new developments include a 127,000-metre-square public garden in Al Rashidiyah, and work is continuing on the development of the Wadi Warrayah springs and waterfall, in the mountains just south of the Fujairah village of Bidiya.

AGRICULTURE AND FISHERIES

Few would naturally associate agricultural abundance with the desert emirates of the UAE. Nevertheless, despite its unfavourable soil (coastal soils are highly saline and the hinterland has a sandy soil rich in potassium) and extremely difficult climatic conditions, the UAE has made major strides in developing a thriving agricultural industry which defies all misguided preconceptions.

Overcoming the seemingly insurmountable obstacles in greening the arid desert has been a particular passion of Sheikh Zayed's since his early years governing the oasis of Al Ain. His inspiration and encouragement, translated into government policy, have paid enormous dividends for the country as a whole.

Significant achievements in the fields of agriculture and fisheries continue to play a key role in securing the UAE's declared objective of full self-sufficiency in food production. Currently, the country is estimated to be about 30 per cent self-sufficient in agricultural products. The incessant support of the government has also increased the ratio of the sector's contribution to GDP from 1.7 per cent in 1992 to 3 per cent in 1997.

Total agricultural products jumped from 731,000 tonnes in 1992 to 1.12 million tonnes in 1995 and 1.29 million tonnes in 1996, while the value of these agricultural products rose from Dh 1.99 billion in 1995 to Dh 2.33 billion in 1996. The stark contrast of this figure with that of Dh 116 million in 1972 underlines the enormous progress in this sector. Growth has been largely achieved by bringing in more land under cultivation. In the five years 1990-95, total agriculture area grew at approximately 11 per cent per annum.

Agriculture

	1986	1997	Increase
No. of productive farms	17,584	23,930	36%
Total area of cultivated land*	380,192 do**	823,307 do	117%
Area of vegetable cultivation	96,837 do	167,347 do	73%
Vegetable production	232,292 tonnes	769,883	231%
Area of fruit cultivation	25,087 do	25,473 do	1.5%
Fruit production	26,218 tonnes	39,118	39%
Area of palm trees	61,355 do	365,118 do	496%
Date palms	4,638,000	25 million	496%
Date production	59,718 tonnes	288,190	383%
Area of fodder cultivation	58,173 do	82,002 do	41%
Fodder production	319,995 tonnes	446,132	39%
No. of greenhouses		6,356	

* Vegetables and fruits except palm trees ** 1 donum = 1000 sq. metres

Domestic Consumption

Dates	100%
Vegetables	63%
Citrus Products	30%
Lemons	78%
Fodder	100%
Concentrated Fodder	100%
Dried Fodder	40%

total of 12,021 farms have been started in the emirate since 1993. Poultry and traditional cattle breeding is more evenly spread across individual emirates.

The economy has seen a steady increase in investment in agriculture and fisheries, with the private sector playing an increasingly important role especially in the dairy, poultry and dates industries. The Ministry of Agriculture and Fisheries actively encourages private sector input into agriculture and provides all the necessary incentives to assist in these ventures. In addition, considerable subsidies are provided by the Ministry, including free distribution of seed, pesticides and fertilisers, as well as the provision of tractors, irrigation and spraying equipment.

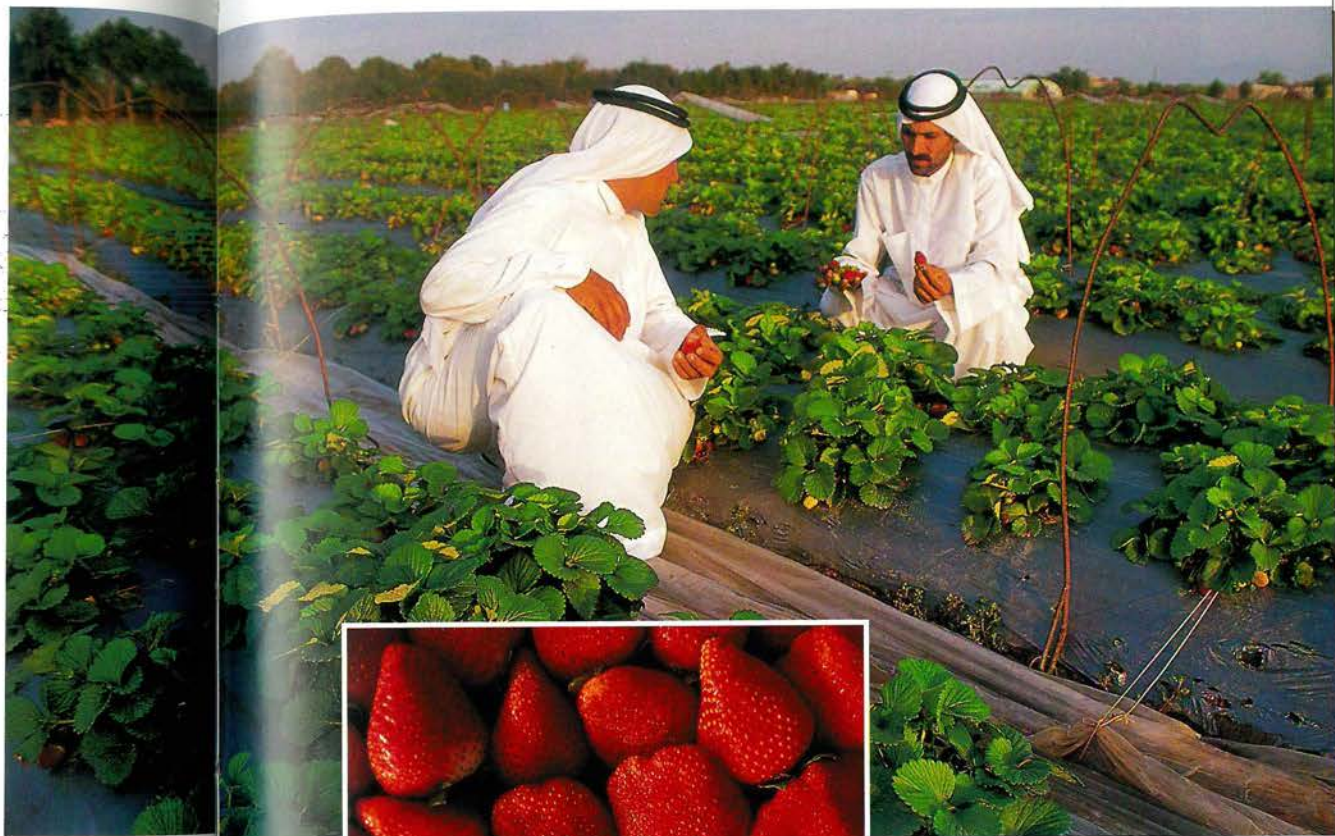
Fruit and vegetables

Vegetables are one of the most important crops: the UAE produced almost 769,883 tonnes of vegetable in 1997, primarily tomatoes, egg plant and cabbage. However, fruit trees occupy the largest part of cultivated area, almost 50 per cent of total, though most of this is taken up by date palm trees. Vegetables occupy less than one fourth the total area, but have the largest share in output, both in quantity and value.

The UAE has approximately 150 million trees, 25 million of which are palm trees. Eighteen million palm trees have been planted in Abu Dhabi alone on over 93,000 hectares of land as part of the Abu Dhabi Municipality and Town Planning Department's continuous campaign towards spreading greenery in the emirate. A total of 60,000 palm trees were planted at roads and agricultural areas inside and outside the emirate in 1997.

The saline coastal soil is eminently suitable for the high salt-tolerant date palms, as well as mangoes and citrus fruits. However, fruit production is overwhelmingly dominated by dates, which account for about 80 per cent of the total. Nevertheless, successful efforts have been made to develop citrus, guava and mango trees. For example, 1,500 mango and 5,000 guava trees have been planted on Ajban farm in the Emirate of Abu Dhabi. Although mangoes (Langra and Malgoa varieties) have been growing in the UAE for nearly ten years, the trees that line the new Corniche in Abu Dhabi are among the first to be successfully produced from cuttings or by grafting. There are also plans to grow jackfruit, a fruit commonly found in India. Over and above these items, fruit production has been limited.

Abu Dhabi, Sharjah (including Dhaid) and Ras al-Khaimah are the three most significant areas for farming. Abu Dhabi, accounting for almost 60 per cent of the total cultivated area, enjoys a pre-eminent position. A



Field crops are dominated by clover and green fodder, with very small quantities of wheat and tobacco. Cereals are notably absent from UAE agriculture

production. In recent years the area under field crops has been declining, and their long term extensive commercial viability is uncertain.

Production in some items is far in excess of domestic requirement, particularly some vegetables, and consequently a significant agricultural export industry has developed. However, agricultural exports have been declining recently, largely because of increased demand from a growing population and a consequent small surplus availability.

Canning factories have been established to utilise excess vegetable production. For example Al Ain Canning Factory processes 500 tonnes of canned tomatoes annually, as well as 15 tonnes of frozen vegetables and pickles for the domestic and international markets. Sales from this factory rose from Dh 9,481,008 in 1986 to Dh 1,002,193 in 1997.



Medinat Zayed, Abu Dhabi.

As in the case of production, tomatoes are the chief item of export, and had a 30 per cent share in the Dh 25 million worth of exports in 1995. Kuwait accounted for virtually all the tomato exports. The traditional export of dates has a relatively small share at Dh 11.31 million. Remarkably, export of dates is now matched by strawberry cultivation! Dh 1.38 million worth of strawberries were exported in 1995, to countries such as Hong Kong, Singapore, South Africa, as well as other Gulf countries.

Local producers are now aiming to double their strawberry production. Mirak, the UAE's chief private strawberry production and export company, produces 500 tonnes of strawberries and 1,000 tonnes of vegetables, lettuce, leeks, celery, iceberg lettuce, cherry tomatoes, asparagus, fennel, red cabbage, melons, Chinese cabbage and broccoli annually and exports 60-70 per cent of its output, while 30 per cent is sold in the local market.

Zayed Agricultural Centre for Rehabilitation of Disabled Persons

One of the remarkable agricultural success stories in the UAE is the Zayed Agricultural Centre. Established in May 1993 with the help of UNDP, in order to develop the productive capacities of disabled persons and enable them to participate actively in the general development of their community, the project has established a farm of 1.2 hectares, including a nursery, two greenhouses, an open agricultural area and a small poultry farm. The first production of cucumber was harvested and sold to Abu Dhabi vegetable market in August 1995. Total vegetable production in 1995 was 1,608 kilograms, rising to 68,672 kilograms in 1997.

Phase II of the project is now underway with the addition of 10 hectares of agricultural land. The new area will support ten additional greenhouses, two of which will be devoted to the cultivation of flowers, fruit and palm tree cultivation, apiculture and poultry rearing, as well as new lodgings for the 20 trainees. Annual production on the farm is expected to reach 72,000 kilograms.

Horticulture

Horticulture has also become an increasingly important agricultural export. The National Horticulture Management Company (NHMC), set up in 1997 to provide marketing and technical assistance to farm owners and local groups, has started marketing flowers produced by the Franserres UAE, an Offset project, under the brand name of Shams. The company targets both the local market and exports mainly to the Middle East, Europe and Asia. Strategic alliances have been established with flower distributors to create a marketing network in the Gulf and in Europe. Shams already exports about 70,000 flowers per month to Riyadh and Beirut.

Franserre UAE has been jointly set up by Dassault Investissements, Thomson Compensation International and Al Hamed Enterprises. It has 44,000 square metres of land near Sweihan where eight high-tech greenhouses have been built. Made of glass, which filters less sunlight than other materials, the greenhouses are designed to last for more than 20 years. A so-called smart computer system controls the environment for



each type of plant, carnations, liliun, gerbera, chrysanthemum, gypsophilia and roses, inside the greenhouses. The yearly production is expected to average one million flowers per greenhouse.

By increasing its capacity further, Shams will be able to achieve scale gains, to develop new partnerships with both wholesalers and retailers worldwide and to keep optimising its production to meet world market demands. Its biggest competitive advantage will be in the winter months when most of the northern hemisphere countries experience severe cold, low sunlight and prohibitive heating costs.

Water

All this agricultural activity requires a ready source of life-giving water. Roughly 70 per cent of the country's water supply is consumed by agriculture. The chief source of irrigation is still ground water, followed by rainwater. Roughly, two thirds of the country's agricultural area is already under a modern irrigation system – the water conserving drip method is the most extensively used.

Ground water in the UAE being of fossil origin, utilised quantities are not regularly replenished by rainwater, except in a few northern regions. In a bid to increase subterranean water reserves, the Ministry has built some 40 dams in various areas, with their total annual water storage amounting to 80 million cubic metres per year. Also, an additional 180 water wells were dug in 1997 to provide agricultural projects in the emirate with the irrigation they need. Desalination plants process 47 million cubic metres of water every year and plants processing sewage water generate 80 million cubic metres of water per year, providing irrigation for parks, forests and cultivated areas. Within the framework of its drive to develop water resources, the Ministry has plans to establish more desalination and treatment plants, new water retention dams and wells in various agricultural areas throughout the country.



Meat and Dairy

Milk Production		124,377 tonnes 97% of domestic consumption
Red Meat Production		20,378 tonnes 24% of domestic consumption
Poultry Meat Production		29,824 tonnes 24% of domestic consumption

Meat industry

Like other areas of the agricultural sector, the UAE meat producing industry has expanded rapidly in the last decade. While not yet self sufficient in meat and poultry products, imports have lost their almost complete domination. The industry has largely expanded in the high value added area of meat processing. Meanwhile, the low value added activity of producing raw materials (livestock, carcass) has not received the same attention as reliance upon imports is commercially more attractive. Domestic production meets 75 per cent of domestic demand for red meat, compared to a mere 17 per cent share of domestic production in sales of livestock/carcass.

Preference in the UAE is for mutton, poultry, or goat: given the pre-dominantly Muslim population, demand for pigmeat is virtually negligible. Annual consumption of meat is around 130 kilograms per adult, of which over 50 per cent is red meat, a high figure by world standards. The demand for meat has been increasing at a faster rate than the escalation in population: so much so that demand has almost doubled in the last five years. This points to a rising standard of living and increased consumer expenditure, which has been a feature of the UAE economy in recent years.

There are currently five meat producing units in the country. Most of these were established in the last five to seven years. Domestic companies have been able to penetrate the market against well-known imported brands because of their price competitiveness. For example, processed red meat products are 20–25 per cent cheaper than imported brands. Domestic poultry products are more expensive, but compete on their higher quality. Production has increased very rapidly in the last three years, rising by 50 per cent between 1993 and 1996 in quantity terms alone. The largest hike has come from poultry production, which has almost doubled in this time, accounting for about 60 per cent of production. Camels, goats, cows and sheep follow in that order.

Quality standards are high. In fact a UAE poultry farm recently became the world's first poultry farm to win ISO 9002 certification, the international benchmark for quality management systems. A leading local brand of fresh chicken and poultry products also received ISO 14001 Environmental Management Systems Certification, and indeed became the first agro-industrial project in the Middle East to win this award.

Exports of meat products from UAE are significant. However, these tend to fluctuate considerably because of the preference of producers to sell this perishable commodity first in the domestic market. Nevertheless, annual exports from UAE in the last three years have averaged Dh 40 million. Exports are currently only constrained by high domestic demand.

Research

Research has been a cornerstone of development in the agricultural sector, ranging from the basic collection of meteorological and soil data to pioneering scientific breakthroughs using the most advance technology in the field. Studies undertaken at research centres in Al Ain, Dhaid, Hamranyah and Kalba have involved a wide range of techniques from mechanical fertilisation of date palms to testing over 30 different kinds of barley and wheat. The Research and Production Department has been involved in all aspects of date palm farming from tissue culture to packaging.

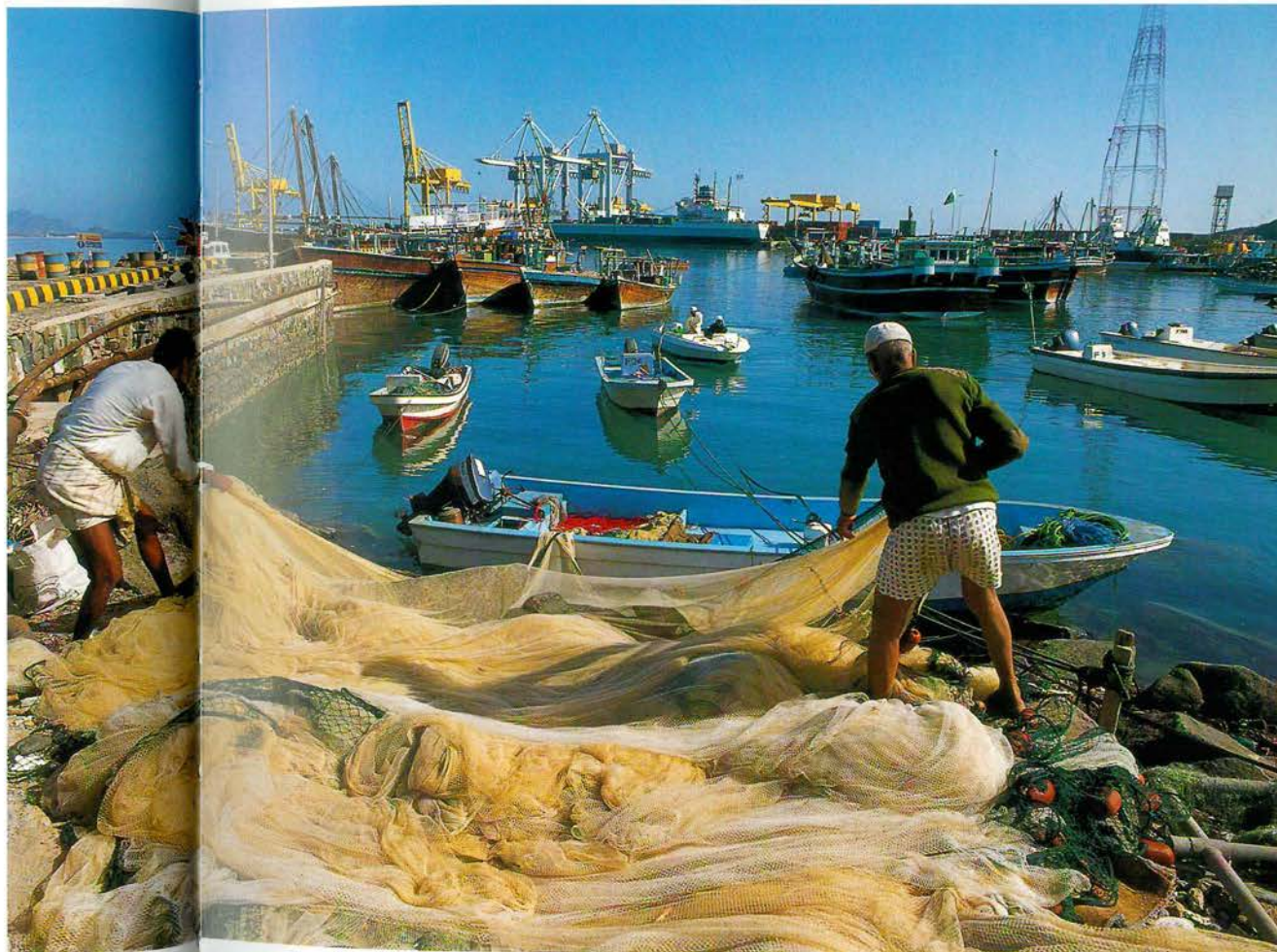
Animal reproduction has also been a major research priority. Fittingly, in a country which prizes its camels as part of its heritage, research in camel

reproduction and breeding has been of a highly dynamic nature. The world's first-ever cross-breed between a camel and a llama was born at Dubai's Camel Reproduction Centre in Dubai in January 1998. Conception was achieved via artificial insemination and the pregnancy lasted just under 12 months. The world's first 'cama', weighing 5.5 kilograms at birth, was fed every two hours on camel milk. He is expected to grow eventually to adult size, somewhere between his two parents which weigh 75 kilograms (his llama mother) and 450 kilograms (his camel father). Rama, as the animal is named, was born on the day of the full moon in the Holy Month of Ramadan. His birth has re-established the link between camels and llamas, which was broken approximately 30 million years ago.

FISHERIES

Fish production in the UAE covers 100 per cent of domestic consumption. The UAE is the second largest producer of fisheries' products in the GCC states; its aggregated fish production stood at 1.059 million tonnes, representing 34.11 per cent of the total fisheries output of the GCC. Fish products amounted to 275,000 tonnes with a total value of Dh 150 million in 1996, compared to 241,000 tonnes with a total value of Dh 99.4 million in 1992.

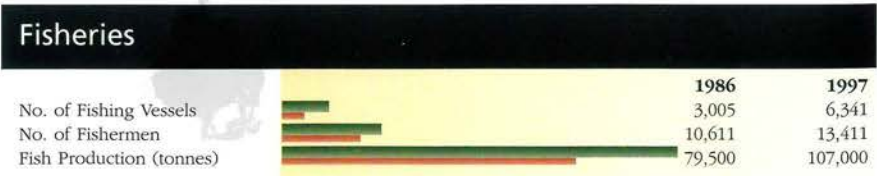
Despite its pre-eminent position, fishermen have seen their returns per boat drop considerably over the last few years, in line with the steady reduction in fish stocks worldwide. This has been particularly noticeable in the Emirate of Umm al-Qaiwain. In 1993, the total fish catch in the emirate was 4,100 tonnes, with a total of 133 fishing boats being licensed. By 1996, the last full year for which figures are available, the total catch had risen to 4,515 tonnes, but the total number of fishing boats had risen to 208, an increase of 56.3 per cent, with the result that the average catch per boat had fallen over the four-year-period from 30.9 tonnes to 21.71 tonnes per year, a decline of 29.74 per cent. Around a quarter of the country's fish catch comes from inshore netting but the percentage this contributes to the total catch is believed to have remained more or less the same over the last few years.





As in other industries the concern is to focus on added value. To this end France's Dassault Investissements and Nireus Chois Aquaculture of Greece are co-operating with two local groups, Oasis National Food Company and Union Cold Stores, in a new offset project. The first stage, with an initial investment of \$1.5 million, will include setting up a 600 square metre air-conditioned fish processing unit in Abu Dhabi. The plant, equipped with the latest state of the art technology, will be involved in all aspects of fish processing, from receiving fish and cephalopods to cleaning, gutting, filleting, freezing and packaging. The design and operation of the plant will meet the stringent international requirements for hygiene and quality, in line with those established by the European Union.

The annual production capacity of the plant is estimated to be 4,000 tonnes, of which 25 per cent will be fresh food products and 75 per cent frozen products. Besides boosting the local market, the venture partners are planning to integrate the regional fish sector into the global market. Using raw materials from the rich waters of neighbouring countries from India to East Africa, the finished products will be exported to the international markets of Europe, the Far East and GCC, countries. These markets are estimated to import more than 6 million tonnes per annum, a figure which is steadily rising.



URBAN DEVELOPMENT

Infrastructural development in the UAE at both federal and local level has been phenomenal, considering the relatively short time-span since the country's establishment. Following Sheikh Zayed's accession as Ruler of Abu Dhabi in 1966 and his election as President of the UAE in 1971, oil revenues were used to create a sophisticated infrastructure around which other developments have prospered. The guiding factor at all times has been improvement in living standards for UAE citizens. As the new millennium approaches, it is clear that what once seemed like impossible dreams have now become reality. Cosmopolitan cities have been built where once there was arid desert; beautifully-landscaped motorways link even the remotest regions; state-of-the-art airports and ports have been constructed, enabling effective communication with the outside world; schools, hospitals, and houses have been provided for the citizens of the UAE, highly advanced telecommunications, power and water facilities have been established, modern industry has been nurtured. The work is ongoing and major investments are still being made, although a slight qualitative shift has taken place with the emphasis on industrial growth.

The federal Ministry of Public Works and Housing is in charge of 60 ongoing projects, including schools, health centres, roads and a prison expansion scheme. The estimated total cost of projects to be undertaken and completed by the Ministry will exceed Dh 2.67 billion in 1998. The federal government's five-year plan aims to carry out projects worth Dh 5.476 billion, spending an average of Dh 1.095 billion a year. Individual emirates are also spending heavily on infrastructure.

A multi-billion dirham master plan up to the year 2010 has been prepared by Abu Dhabi's Municipality and Town Planning Department, with the aim of adequately equipping the emirate to face the challenges of the new millennium. An initial Dh 11.8 billion budget is being earmarked for major infrastructural projects, including roads and bridges linking cities and villages, low-cost houses, schools, and medical centres, to be executed between 1998 and 2002. In the meantime, the Municipality is undertaking a Dh 1.58 billion rehabilitation of the capital's sewerage system.

Abu Dhabi's long-term plan is designed to cover the existing capital and adjoining areas, in addition to ten urban residential areas, ten rural residential areas and several islands. Based on recent data, the blueprint has taken into consideration future infrastructural and socio-economic requirements. Amongst other projects, the plan envisages a huge new area of multi-storeyed shopping malls, car parks, recreation and exhibition areas and a tree-shaded civic square to replace the old souqs on either side of Khalifa Street.



Reclamation work is already under way on Hodeiryat Island, which is destined to be an extension of Abu Dhabi city. The island, located west of Abu Dhabi Island and about half its the size, will be designed as high class, medium density and high density housing areas. It will also have recreation facilities, including a large marina, parks and shopping areas, and will be connected to the main island of Abu Dhabi by at least two bridges.

The plan also envisages a major expansion in leisure, cultural and sporting facilities throughout the emirate. Proposals include a planetarium, botanical garden and arboretum in Al Ain, an educational marine park, a marina and tourist complex in Mirfa, and an oasis-type hotel and desert adventure in Liwa. In addition, the Lulu Island development will offer features such as a beach park, a huge jungle-like animal park, zoo pavilions,



Sharjah.

an aviary, 'seaquarium', hotels, a golf course, planetarium, museum and a cultural centre. There will also be a science centre, theatre, water park, grand park for mini-races for cars and go-karts, equestrian centre, butterfly house, children zoo, heritage exhibition, a dhow dock and building yard. Transport around the island will be monorail, and connections with the mainland could be by water taxi, monorail or an undersea tunnel. There is also a proposal for a massive cable system to link the island with the Corniche, which would provide a wonderful view of the city and the island to cable car passengers.

The ten selected settlements in rural areas to be developed under the Regional Development Plan (RDP) are Madinat Zayed, which is to be the capital of the Western Region; Baynunah; Samha; Mirfa, which is 160 kilometres west of Abu Dhabi city and is planned partly as a residential and as a tourist centre; Ghayathi; Dhabbiya; Dalma Island; Ba'yah on the western boundary with Saudi Arabia; Muzair'ah in Liwa; and Al Khatam. Priority is being given to the development of Madinat Zayed, Mirfa and Ghayathi. Implementation of projects has already started in these areas.

In order to facilitate developments, major investment is required in the transport, power and water sectors. Substantial investment is also required for housing, social, cultural and institutional development, agriculture, commerce and industry. The RDP forecasts that a total of 158,000 new and replacement housing units will be required during the plan period to accommodate future population growth in the emirate.

Abu Dhabi's population grew three-fold in the 15 years to 650,000 in 1990 and is forecast to rise over 1,200,000 by the year 2010. The Regional Land Use Plan, the main component of the RDP, provides a co-ordinated and flexible framework for the location and control of proposed developments.

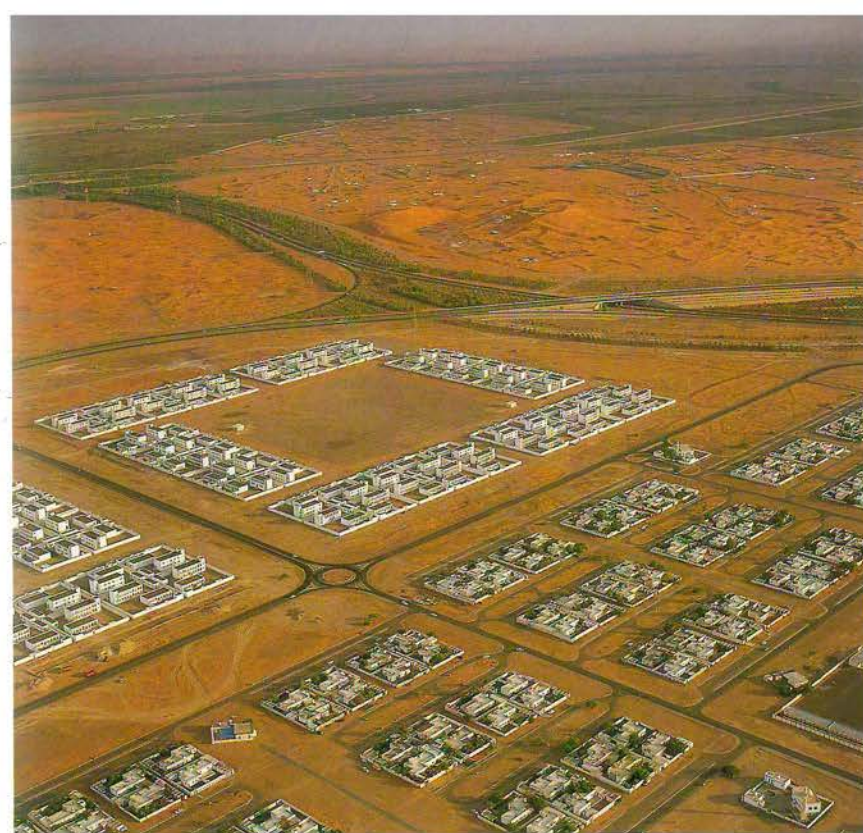
The plan delineates scenic, environmentally sensitive areas and nature reserves where special controls on development will apply to safeguard the natural environment. All projects proposed in these settlements have to conform with the master plan. No heavy industries are to be set up in the new settlements. Instead, light industries and workshops will be promoted in the designated areas. By the year 2010, it is hoped that all the infrastructure developments, housing, utility services and so forth will be completed.

Dubai municipality is implementing projects worth \$400 million, including residential developments, multi-storey car parks, 300 low-cost homes for nationals, and roads.

Housing

Housing for UAE citizens has been a major concern of Sheikh Zayed and the government of the UAE, believing as they do, that it is one of the essential requirements for a stable family life, and for society. The task has been a difficult one since population increases have created a high demand for new dwellings.

To meet housing needs, an ambitious plan was jointly implemented by federal (Ministry of Public Works and Housing) and local departments as well as individuals and private firms. The plan extended to rural and urban areas in a bid to help people remain in their localities and to create a balanced social and economic link between the regions. Houses were built and distributed, so too were plots of land and additions made to



already-existing houses. The number of housing units provided across the UAE has exceeded 53,600 to date. The Ministry is also constructing 2,545 houses in Abu Dhabi, Al Ain and the northern emirates, at a total cost of Dh 1.8 billion.

Plans were set in motion to help those who are of reasonable means to obtain satisfactory loans for house-building. Abu Dhabi issued law No 3/1990 on the setting up of a housing loans fund to provide citizens with easy-term loans for the construction, completion and improvement of houses. A similar Law No 11/1993 was issued in Dubai.

To address difficulties in the housing market, a new Dh 640 million house-building programme for UAE citizens was announced in June 1998. The establishment of the programme, entitled the Sheikh Zayed Housing Programme, follows extensive discussions by Supreme Council members with a special committee established by the Federal National Council on housing problems faced by citizens throughout the country.

The new programme, to be administered by the federal government, will undertake the building of new houses 'in all areas of the country,' in line with the President's wish that citizens should be provided with accommodation that will permit them to live a decent life, improve their standard of living and be guaranteed social security.

Besides building housing for citizens on a low income, the government will also offer interest-free loans to those who have sufficient financial resources. The loans will be repayable over a 20-year period.

Housing - December 1995

Apartments	154,154
Houses	53,708
Low-cost Houses	8,777
Villas	36,710
Others	82,757
Total	336,106

reiterating the need to establish a housing loan scheme through a general authority.

The Committee urged local governments to continue their existing programmes and asked the municipalities to facilitate the housing scheme through provision of residential plots. The Committee also requested the private sector to contribute to the housing projects.

Roads

The Ministry of Public Works and Housing will undertake 15 highway projects and a number of maintenance projects, including 50 flyovers and interchanges, at a cost of Dh 1.96 billion during the next eight years. The projects are being implemented in three phases, the Dh 568 million first phase is being carried out in 1997 and 1998, the Dh 235 million second phase between 1999 and 2000 and the third Dh 98 million phase between 2001 and 2005.

One of the landmark projects presently under construction is the strategic Al Sajaa-Al Khawanij highway. The construction of this 14-kilometre project began in January 1996. Plans are also being drawn-up by the Ministry of Public Works and Housing for a major inter-Emirate highway that will link all of the seven emirates, from Abu Dhabi to Ras al-Khaimah and across to Fujairah. When completed, the new highway is likely to be of major benefit, especially to commercial traffic between the emirates, facilitating in particular the transshipment of goods by road from the country's ports' network.

Major upgrading work on the highway from Abu Dhabi to Jebel Ali is already nearly complete, while other links in the new inter-emirate highway are likely to include the building of a road from Jebel Ali to Sharjah, by-passing the city of Dubai, and northwards from Sharjah to Ras al-Khaimah. The Ministry has just completed the Al Mafrqa-Al Khatam highway. The Abu Dhabi-Al Ain highway was further expanded to a three-lane road with ten fly-overs, nine camel passages and eight pedestrian crossings. The total cost of the project is

The Federal National Council's special committee on housing welcomed confirmation of the financial allocation enabling the establishment of the housing programme and called for the formulation of a strategy to tackle the problem of accumulating applications, as well as

estimated at Dh 210 million. The new Abu Dhabi-Dubai highway, stretching for 76 kilometres, was designed to have a four-lane road, costing Dh 1.1 billion.

Dubai Municipality are also constructing a 64-kilometre ring road connecting Dubai's major ports. The three-phase project will be completed in 24 months. Meanwhile, the roads connecting Al Garhoud Road at the Bani Yas intersection were opened to traffic in August 1998 after Dubai Municipality completed work on the Dh 86 million project which began at the end of 1996. The refurbishments are expected to ensure the smooth flow of traffic from Garhoud Bridge Centre.



TRANSPORT

Considering the important role airports play in economic development, it is not surprising that major investment continues to be made in upgrading and expansion of the UAE's six international airports. Improvement plans underway at the airports exceed \$1.5 billion to date.

Abu Dhabi

Abu Dhabi is expanding both its international airports. Work on the \$200 million development project planned for Abu Dhabi International Airport (ADIA), including the new runway and satellite terminal, will be completed by the year 2002. Designed to guide the airport into the next century, the major emphasis is on passenger service and comfort. When completed, the project is expected to increase annual capacity at the terminal complex to more than seven million passengers per year, establishing ADIA as a major hub station.

New facilities include advanced radar systems; a 60-metres wide second runway equipped with high-tech landing and lighting systems; a new 100-metre diameter terminal with 11 aircraft bays, which will be linked to the existing terminal by a rapid transit shuttle; refurbishment and upgrading of the existing terminal; as well as new passenger lounges,



Abu Dhabi International Airport.

restaurants, a 200-room hotel and leisure facilities, and expanded duty free. The new cargo and freight facility will double the existing storage capacity and have all cargo handling under one roof, providing for the first time in the region, 'vehicle free' facilities for transport of freight. The first phase of the Dh 35 million cargo terminal will be completed by early 1999.

Al Ain International Airport is also being upgraded under a \$100 million scheme which will expand capacity by 50 per cent. A dedicated cargo terminal, bonded warehouse, passenger facilities and a new radar system are under construction. A free zone is also planned.

Dubai

The \$540 million expansion at Dubai International Airport is designed to meet passenger requirements up until the year 2015. Passenger capacity will double to 12 million and cargo handling to 750,000 tonnes a year in 1999. The project includes a new five-storey concourse building, connected by tunnel to the existing terminal. There will be a 9,300 square metre duty-free shopping complex and a five-star 100-room hotel for transit passengers. As already indicated, a major free zone development is also taking place at the airport, including a new warehouse and distribution centre and an information technology park.

Sharjah

Sharjah International Airport's \$50 million expansion programme includes a 7,500 square metre building, four new cargo aircraft, parking bays and an expansion of the airport free zone. The airport recorded a freight throughput of 44,251 tonnes in March, in the process climbing to thirtieth place among the top cargo hubs worldwide; the first Middle East airport ever to make it to the top-30 list.

PORTS

Situated on a major crossroads of the world's sea trading routes, seaports have been a primary development priority in the UAE. In fact all emirates and major cities are located on the coast. There are nine modern commercial seaports in the country, each emirate having its own seaport, with Dubai and Sharjah having two each. With 168 deepwater berths, the UAE accounts for almost half of the shipping capacity in the Gulf. Traditionally the life-blood of the entrepôt trade, the ports are constantly upgrading an already sophisticated infrastructure, in order to maintain and increase market share.

Abu Dhabi

Mina (Port) Zayed in Abu Dhabi is a multipurpose port equipped with 21 berths and visited by 50 leading shipping lines on a regular basis. It possesses state-of-the-art facilities for the handling of all kinds of cargo. The throughput for 1997 was 3.5 million tonnes, compared to 3.2 million tonnes in 1996, representing an increase of 5.3 per cent in the total tonnage, including general cargo. The port also witnessed a growth of 7 per cent in container tonnage and 10 per cent in general cargo. Mina Zayed is also experiencing record traffic in 1998, reaching over 250,000 TEUs for the first time since the port's inception 26 years ago.

A highly-ambitious expansion plan prepared by the Abu Dhabi Seaport Authority is set to propel Mina Zayed to a leading position in the region. The major expansion plan will cost Dh 2,399 billion (\$653.60 million) and involves upgrading its existing facilities, as well as improving access to Mussafah industrial zone.

Development projects include deepening the existing channel from 13 metres to 15 metres, and building a new container terminal with four gantry cranes, which should be completed by the year 2000. Two new Panamax ship-to-shore cranes were acquired in 1998, the fabrication work of which was done at Musaffah. This has raised the number of container cranes at the port to five, while tenders have been placed for two more.

The port development plan has proposed the acquisition of four more cranes. The aim is that by 2006 Mina Zayed should operate 11 shore-to-shore cranes. Plans are also underway to construct a second four-berth container terminal opposite the existing one, in the eastern part of the port. The new terminal should be operational by around 2013.

Mina Zayed thus far has secured links with over 25 shipping lines, including Uniglor and Messina. The second 5,000 tonne capacity cold store under construction at the port is expected to be operational this year. Bunker supply facilities have already been created in co-operation with ADNOC, and bunker fuel is now available at the port at competitive prices.

The new cargo handling terminal, with a capacity to handle between 300,000 to 500,000 tonnes a year of project and general cargo, is expected to be operational by the end of 1999. The port is working towards handling around 150 container loads of traffic a day, a necessary expansion with so many new projects under way, and the Ruwais petrochemical plant scheduled to begin production in 1998.

Abu Dhabi is also discussing a \$575 million plan to develop Taweelah Industrial Port 80 kilometres north of Abu Dhabi city. The site of the proposed new port was chosen because of its open access to deep water and close proximity to the nearby power and water complex. The Abu Dhabi Shipbuilding Company plans to site its new ship repair and construction yard at the new port.



Mina Zayed.



Jebel Ali.

Dubai

Dubai, with 103 berths, has the largest shipping capacity in the UAE. Shipping activity is dominated by Port Rashid, which is the leading port of the Gulf, though its Jebel Ali port is not only the largest port in the country, but is also the largest man-made port in the world. It mainly handles bulk cargo and industrial material relating to manufacturing units in the Jebel Ali Industrial Zone. The Dubai Ports Authority (covering Port Rashid and Jebel Ali) recorded growth of 16 per cent in 1997 as a result of expansion in the US, European, Japanese, Indian and Taiwanese markets. DPA expects an increase to 3.7 million TEUs by 2003. Dubai's ship repair yard and dry dock is the largest dry dock in the world, its three berths having a total capacity of 1,850,000 tons.

Sharjah

Sharjah is the only emirate to have a port on both coastlines of the UAE. The two (Port Khalid and Khor Fakkan) are linked by a coast-to-coast modern multi-lane network, and have a common customs system. Consequently, containers can move freely between the

Indian Ocean and the Gulf to reach the feeder vessels on either side. Traffic through Sharjah's two ports expanded in 1997, with Khor Fakkan container terminal increasing cargoes by 15 per cent to 750,817 TEUs, and Mina Khalid recording growth of 21 per cent to 64,564 TEUs. The Mina Khalid container terminal is also heading for a record year in 1998, in the first half of the year over 40,000 TEU's had been handled, with 7,100 TEU's moving through the terminal in June alone.

Given its strategic importance, the Sharjah Ports Authority (SPA) has embarked on a \$40 million project to upgrade and expand the Khor Fakkan container terminal. The project involves the construction of a further 350 metres of quay, giving a total of 1,060 metres, with an alongside depth of 15 metres, in the process creating space for a fourth berth. Two gantry cranes, the largest in the region, will be positioned on the new extension. The turning basin is being enlarged to compensate for the quay extension and accommodate the ever-increasing size of vessels calling at the port. A new breakwater will also protect the quay's seaward side.

Fujairah

Fujairah's port is strategically located just outside the Straits of Hormuz. Traffic declined at Fujairah in 1997, but expansion of its bunkering facilities will make it one of the world's top three bunkering ports, after Rotterdam and Singapore. The \$84 million Van Ommeran Tank Terminal is due for completion in 1999. The port's business is supplemented by the adjacent free zone and by the nearby Fujairah International Airport.

Umm al-Qaiwain

Ahmed bin Rashid Port at Umm al-Qaiwain has seen substantial development over the course of the last two years, while there has been a record increase in business by firms in the port's free zone and in cargo throughput. The value of exports from the port rose to about Dh 2.08 million in 1997, compared to Dh 8.3 million in 1996. Imports, however, fell to about Dh 29 million in 1997, from about Dh 34 million in 1996. The success achieved by the free zone has encouraged the government to increase the zone's area and that of the port to more than 215,000 square metres.

Ras al-Khaimah

Located in the Straits of Hormuz, Ras al-Khaimah's Mina Saqr has always enjoyed high levels of transshipment trade. It has now improved container handling facilities and is poised for growth. In addition, Mina Saqr has traditionally handled Ras al-Khaimah's exports of limestone, crushed rocks and aggregates.

Ajman

The port has 12 quays, receiving around 1,000 vessels per year, as well as seven warehouses with a total storage capacity of 43,560 square metres. Port facilities have been radically improved to support the Ajman Free Zone established in 1988, and the growing garment manufacturing industry in the emirate.



Khor Fakkan port.



ELECTRICITY AND WATER

Electricity

Mindful of the role that they play in economic development, the UAE has invested considerably in the electricity and power sectors throughout the past 27 years. This investment is continuing. The country's power plants are primarily owned by the Abu Dhabi, Dubai and Sharjah governments with five plants each. Production and capacity of the federal Ministry of Water and Electricity's (MEW) 14 plants account for less than 15 per cent.

Total electricity generation in 1996 amounted to 26,573 million KW, a growth of 11.3 per cent, compared to the previous year. About 97 per cent of the UAE's electricity is produced by gas and 3 per cent by generation sets using diesel and steam turbines. Being a by-product of crude oil, production costs for power generated from gas were cheap while costs for diesel production were 40 per cent higher than that of fuel oil.

Already high because of increased population and a significant rise in the standard of living (nearly four-fifths of the total connections are for residences), power demand is expected to surge as a result of a continuing rise in the standard of living, government policy to promote large-scale industrialisation in pursuit of economic diversification, and advances in the tourism industry. Certainly, increase in demand will come from Abu Dhabi's plans to expand its industrial base at Ruwais, Mussafah and Taweelah. Consequently, the water and power sector has a prominent role in that emirate's four-year plan for 1998-2002, when the sector will account for Dh 29.2 billion to be invested during that period.

Electrical projects underway in the UAE include extension of Abu Dhabi's Taweelah B power/desalination station, which is scheduled for completion in 2001; upgrading of Jebel Ali D power plant by Dubai Electricity and Water Authority (DEWA); Sharjah's expansion of Layyah power/water station and building of a new power station at Khor Fakkan. Contracts were also signed in 1997 for a \$114 million west coast power interconnection project, which will supply much needed power to the northern emirates.

There are also plans for a UAE national grid, which will be linked to a \$1.3-\$1.7 billion GCC power grid, to be integrated into a \$6.5 billion system connecting the Arab world and Europe via Turkey. The first phase of the two-phase GCC project, including a power link between Saudi Arabia, Kuwait, Bahrain and Qatar, will be completed by the year 2002. The second, connecting Oman and the UAE, is expected to be completed by the year 2007.

Abu Dhabi intends to radically restructure and privatise the entire power and water monopolies, while other emirates are also pursuing plans to incorporate build-operate-transfer methods of financing their own utilities. The privatisation process aims to streamline the industry, providing better services for the public, with government supervision ensuring quality and cost effectiveness.

Installed Capacity for Electricity

Megawatts, 1996

Emirate	Installed	Available	Share
Abu Dhabi	3,232	3,009	45%
Dubai	2,107	1,787	26%
Sharjah	1,088	1,054	16%
Federal Ministry	1,039	873	13%
Total	7,466	6,723	100%

Source: Ministry of Water & Electricity

Fuel Consumption by all Power Stations

1996

Natural Gas	382.9 million MMBTU
Crude Oil	17.1 million Imperial Gallons
Diesel	50.7 million Imperial Gallons
MFO	7.2 million Imperial Gallons

Source: Ministry of Water & Electricity

Production by the Federal Ministry

1996

Source	Production in Mn Kwh	Share %	Fuel Consumption
Gas	2,591	85.0%	37.5Mn MMBTU
Diesel	410	13.5%	34.6 Mn Imp. Gallons
Fuel Oil	48	1.5%	3.2 Mn Imp. Gallons
Total	3,049	100%	

Source: Ministry of Water & Electricity

Economic Efficiency

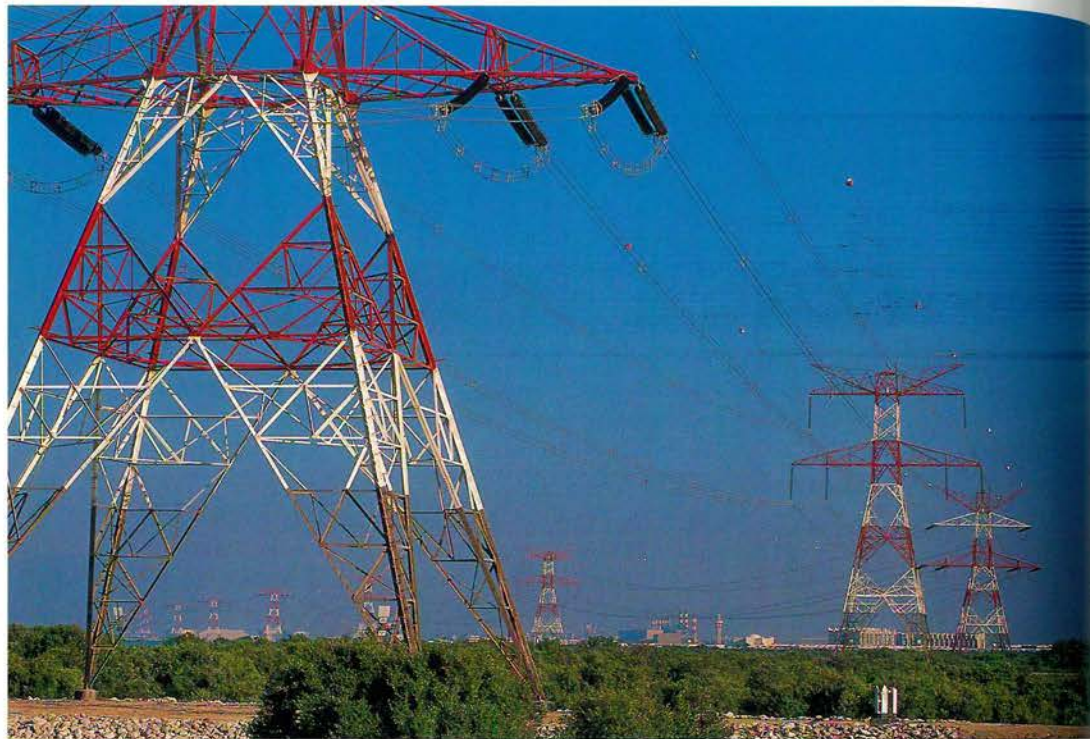
1996

Source	System Efficiency	Input Cost	Production Cost fils per Kwh
Natural Gas	68.95 Kwh/MMBTU	4.59/MMBTU	*6.7
Diesel Oil	11.88 Kwh/Imperial Gallon	3.14/I.G.	26.4
Med. Fuel Oil	15.11 Kwh/Imperial Gallon	1.87/I.G.	12.4

Source: Federal Ministry and EIB estimates * 8.6 fils incl. transportation

The Privatisation Committee for the Water and Electricity sector intends to break up the state-owned Water and Electricity Department (WED) into autonomous units by the end of 1999. WED's power generation/desalination assets will be separated into four sections. Distribution will be divided into two independent companies, but transmission will remain a government monopoly, allowing the government to set buying and selling prices. A new government agency, the Abu Dhabi Water and Electricity Authority (ADWEA), was set up in March 1998. It will have overall supervisory powers but an independent watchdog will monitor tariffs and regulate competition, environmental standards and ownership concentration. Subsidies (for nationals) are likely to continue, but will be funded by the government.

The new generating and distributive companies will be joint ventures; private companies will take a 40 per cent holding, with the government initially taking the rest through a holding company owned by ADWEA. This stake will be gradually reduced through public offerings to nationals.



The first such privatisation project to be set in motion by the Privatisation Committee, the building of the natural gas-fired power generation and desalination facility at Al Taweelah, northeast of Abu Dhabi city, is already underway. The power station will have 480 to 580 megawatts of electricity-generating capacity a day. Abu Dhabi's government already operates two other power and desalination stations at the site.

Water

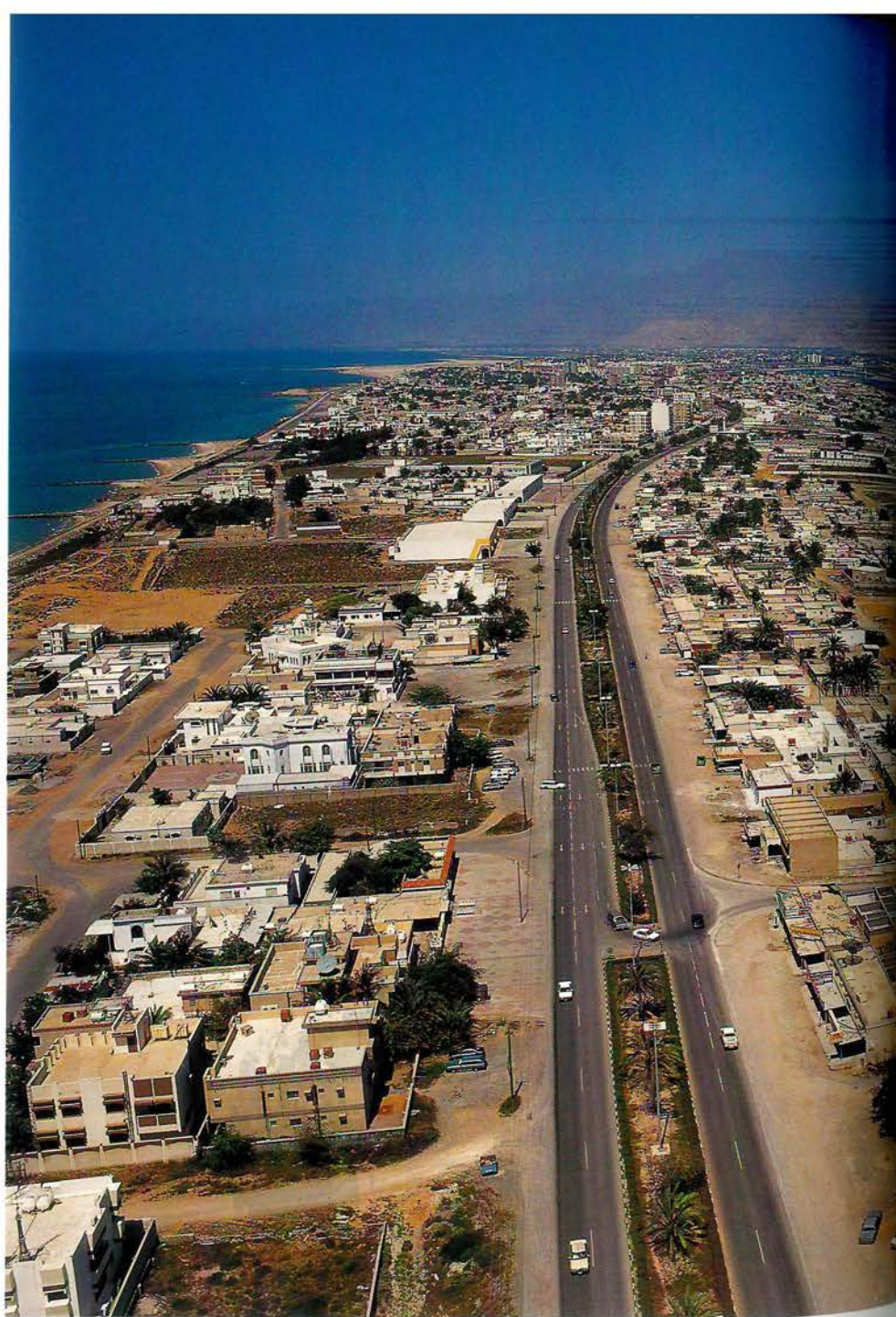
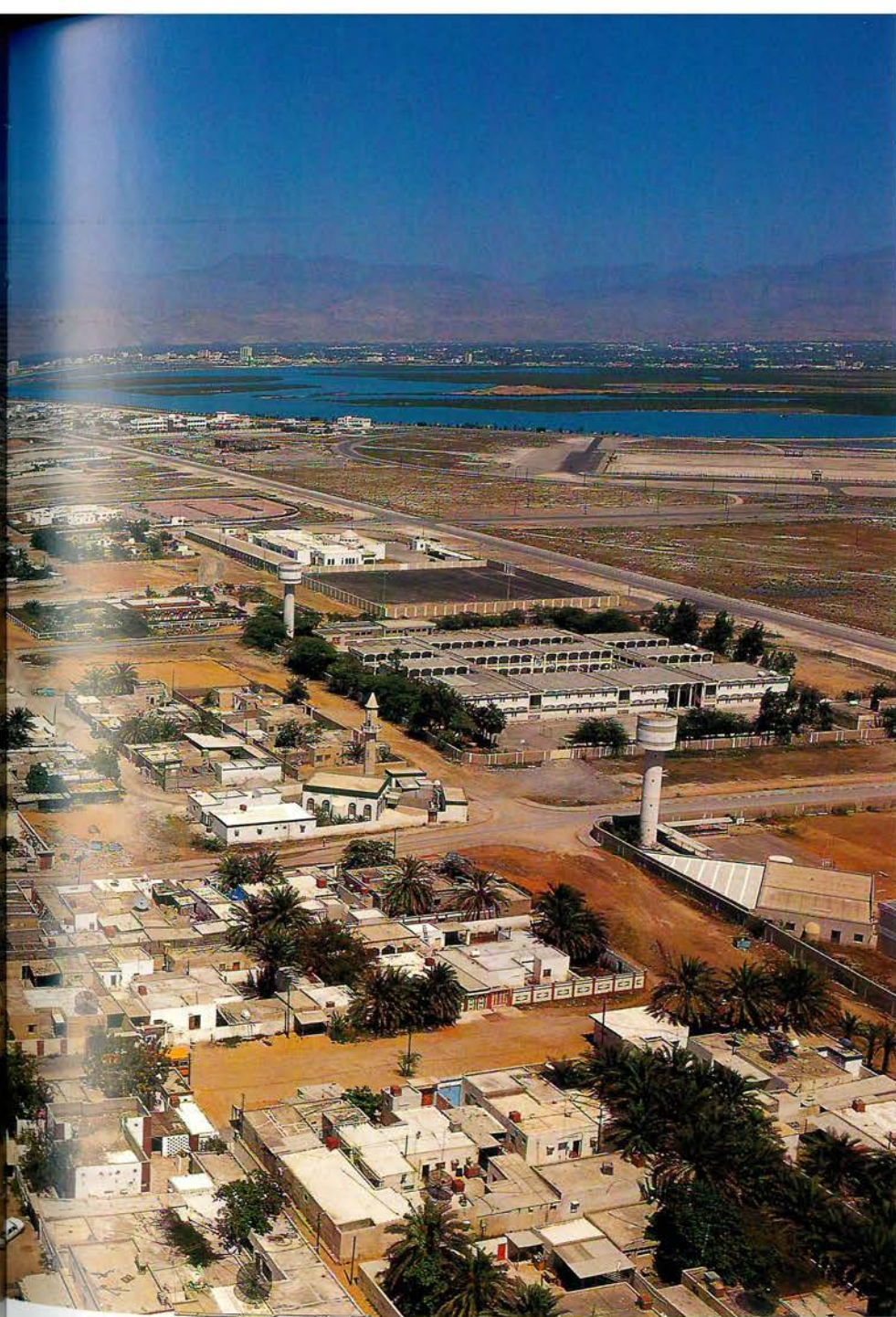
There are three sources of water supply in the UAE: ground water, including surface wells charged by seasonal rains (renewable ground water) and some deep wells charged by ancient geological formations (non-renewable ground water); desalinated water; and treated sewage water.

Ground water accounts for roughly 30 per cent of drinking water requirements and is a major source for agriculture. Renewable ground water depends on rainfall for stock replenishment, which in the UAE is not only scanty but erratic. Average rainfall is 42 millimetres, except in Ras al-Khaimah where it is close to 150 millimetres per year. According to the federal Ministry of Electricity and Water (MEW), in 1997 ground water produced in the UAE amounted to 31,961 million gallons, as compared to 35,990 million gallons in 1990.



Depletion of ground water can have a pronounced effect on the quality of well-water. A recent study was conducted by the National Drilling Company (NDC) of Abu Dhabi and the United States Geological Survey, (USGS) on ground water resources in Liwa. During the years 1991–1996, 117 wells were examined and results indicated a high increase in salinity in some farm wells. This was attributed to over-pumping (ground water pumping being higher than recharging levels) and excessive use of fertilisers.

Ground water was the main source of fresh water in the UAE until sea water desalination started in 1973 to meet the overwhelming demand from the burgeoning economy. Today, desalination plants produce around 70 per cent of the total potable water needed in the UAE, amounting to about 11 per cent of total desalinated water produced in the world.

*Ras al-Khaimah.*

The total desalinated water produced in the UAE in 1997 was 1.9 billion cubic metres per day. Of this, Abu Dhabi produced 1,113,813 (1.11 billion) cubic metres per day (57 per cent), Dubai 675,778 cubic metres per day (35 per cent), Sharjah 93,300 cubic metres per day (4.7 per cent) and the northern emirates 62,886 cubic metres per day (3.3 per cent).

Desalinated water is used for domestic and some industrial purposes. The UAE employs three desalinating technologies: multi-stage flash, which produces the largest share of desalinated water in addition to generating electricity; multi-effect desalination; and reverse osmosis. The disadvantage of desalination is that the cost of establishment, management and maintenance of plants is very high and so is energy consumption. Due to the high cost of production, it is difficult to recover the entire costs from consumers and subsidised water prices are part of the UAE's welfare system.

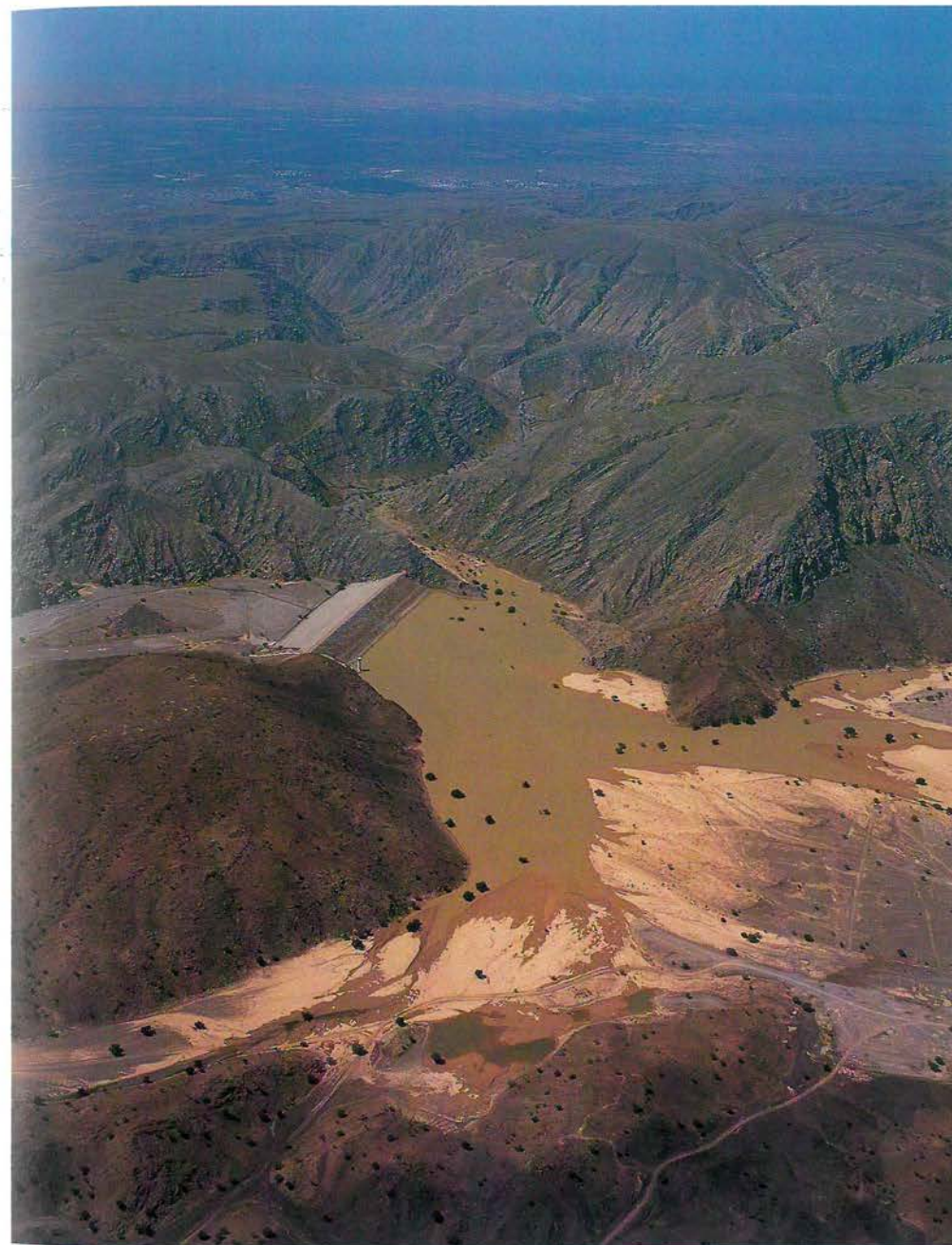
Despite the scarcity of natural water sources, per capita water consumption in the UAE is very high, averaging 400 litres daily. According to 1994 figures, the biggest water consumer was the agricultural sector at 950 million cubic metres, followed by the household sector at 512 million cubic metres and the industrial sector at 22 million cubic metres. Consumption demand has been steadily growing in face of the rising population, agricultural expansion, industrial growth and the development of a viable tourism industry with the concomitant increase in hotels, users of copious quantities of water.

A number of ways of conserving and increasing the precious water supply are under discussion at federal and emirate level. These include: building more dams in valleys to trap rainwater; conducting a comprehensive survey of ground water resources to define quantity of ground water in each emirate; encouraging farmers to use new irrigation methods like drip irrigation and instructing them in the correct methods of using fertilisers to reduce contamination of ground water; evaluating environmental impacts when establishing new desalination plants and finding new sources of renewable energy; and expanding use of treated sewage water, for example as irrigation for some edible fresh crops or in the petrochemical industry, which requires huge amounts of water for cooling purposes.

MEW is in charge of water production in the northern emirates of Fujairah, Ras al-Khaimah, Ajman and Umm al-Qaiwain, while this responsibility is given to local water authorities in Abu Dhabi, Dubai and Sharjah.

In accordance with their objective of improving water supplies in the northern emirates, MEW opened a Dh 105 million desalination plant in the Al Nakheel area of Ras al-Khaimah in December 1997. The process used in this plant – multi-effective desalination with thermal vapour compression – ensures low water production costs. The Ministry intends to spend a further Dh 55 million in water projects in the Emirate of Ras al-Khaimah in the near future. Other projects are planned for Fujairah and Ajman.

The Sharjah Electricity and Water Authority (SEWA) is also working on two major projects to increase production and supply of water in Sharjah city, at a total cost of Dh 765 million. The new projects, a three-phase expansion of Al Layyah desalination plant and a new plant at Al Reqa'a Al Hamra, will meet the rising demand for water because of economic and urban development projects being executed in Sharjah.



The federal government is continually building more dams to trap water.

TELECOMMUNICATIONS

Emirates Telecommunications Corporation (ETISALAT), one of the largest and most successful companies in the Middle East, controls the telecommunications business in the UAE. Established in 1976, ETISALAT, in which the UAE government holds 60 per cent of the shares with private investors holding the balance, has invested heavily to expand telecommunications services in the region. ETISALAT's network of satellite, earth and coastal stations; landlines, covering the length and breadth of the UAE; submarine cable systems, cable ships, fibre optic cables and international projects ensure that the UAE has one of the most advanced telecommunications services in the world.

The number of telephone lines provided by ETISALAT in the UAE matches the highest international rate. Capacity in local and international communications was increased enormously by the use of fibre optic cables to meet the increasing demand. The UAE was the first country in the region to introduce the GSM system for mobile telephones. ETISALAT inaugurated the Emirates Data Network in 1986, and continued to adopt the

latest technology in this field, culminating with the introduction of the Internet service in August 1995, and non-simultaneous transmission in 1997. Plans are in place to make the UAE a regional hub for internet services, serving countries in the Gulf region, the Middle East, South-East and Central Asia, and East Africa. One of the advance services offered by ETISALAT is the video conferencing system, which facilitates participation in conferences via satellite. ETISALAT is also linked to two INTELSAT and two ARABSAT satellites and is a major shareholder in the new Thuraya Satellite Telecommunications Company (TSTC). ETISALAT recorded a 9 per cent rise in net profits to Dh 1.86 billion (\$506 million) in 1997.

Mobile phones

Mobile phone use in the UAE is the highest in the Middle East, primarily due to low subscription fees: the number of subscribers has reached 380,000 while the capacity of the network is 500,000. ETISALAT has increased the number of transmission terminals from 112 in 1996 to 345 in 1998 and expanded the communication network to cover all areas. Although priority is given to populated areas, ETISALAT is also working on a plan to cover more remote regions. Expanding communications networks is a continuous part of the overall development process. With the launching of the \$1 billion Al Thuraya project in 2000, major changes in mobile communication systems will take place.

Al Thuraya

The joint-stock TSTC, which will operate a mobile satellite communications service covering 49 countries, including the Middle East, North Africa, Pakistan, India, Bangladesh, Turkey, parts of Europe and Central Asia, was officially launched in Abu Dhabi in January 1997. Capitalised at \$500 million, shares are divided between ETISALAT and telecommunications companies throughout the Middle East and North Africa. A public offering may be made some time in the future, but at present TSTC is raising a \$550 million loan through syndicated finance from banks to fund the project.

In September 1997, Al Thuraya awarded HSCI a \$1 billion turnkey contract for supply of the new system which is based on two satellites, Hughes GEM Satellites (HS 702 Variant) employing On-Board Digital Signal Processor for establishing single-hop mobile-to-mobile calls, as well as calls between mobiles and public telecommunication networks. The first satellite is to be launched on or before 11 May 2000 and is expected to be operational by September 2000. The second will be launched within two to three years of operation, both of them having an operational lifespan of 12 years.

The ground segment of the Al Thuraya project will be based on a primary gateway presently being built in Sharjah by ETISALAT for lease to the Al Thuraya company. Building project costs are estimated at Dh 60 million. The Swedish company Ericsson will supply the primary gateway switching equipment, including Operation Support System. A satellite Operation Centre and Advanced Operation Centre will also be built in the UAE. Additional regional gateways can be erected in countries which need them, or where it is economical for them to be built.

At the delivery end, Hughes has developed a Common Air Interface. Hughes Network Systems of Maryland, USA, and Ascom Corporation of Switzerland have been selected as technology partners for the development and manufacture of 235,000 dual mode handsets for Al Thuraya's terminals. In the satellite mode, the terminals will directly communicate via satellite to one of Al Thuraya's multiple gateways and provide users with services very similar to GSM features. In the GSM mode, these terminals will operate as high-end phones and will directly communicate with the GSM network. The handsets will have a maximum weight of around 200 grams, and the cost to service providers will be around \$600.

There is also the possibility of new manufacturers being selected to supply further handsets. Al Thuraya will provide voice service using DVSI codec; a group 3 fax service at 2.4, 4.8 & 9.6 kbps rates; data service at 2.4, 4.8 & 9.6 kbps rates; and Subscriber Location Determination using integrated GPS technology.

Fibre Optic Gulf

The Fibre Optic Gulf project (FOG), linking the UAE with Kuwait via Qatar and Bahrain, has become operational. The cable system, with a length of 1,300 kilometres, was laid at a cost of \$79 million. Jointly owned by ETISALAT, Kuwait's Ministry of Communications, the Qatar Public Telecommunications Corporation, and the Bahrain Telecommunications Company, the project is designed to meet the fast-growing telecommunications needs of the Arabian Gulf countries by linking the eastern and western hemispheres. The project has four landing points in owner countries, namely Kuwait, Doha, Manama and Dubai.

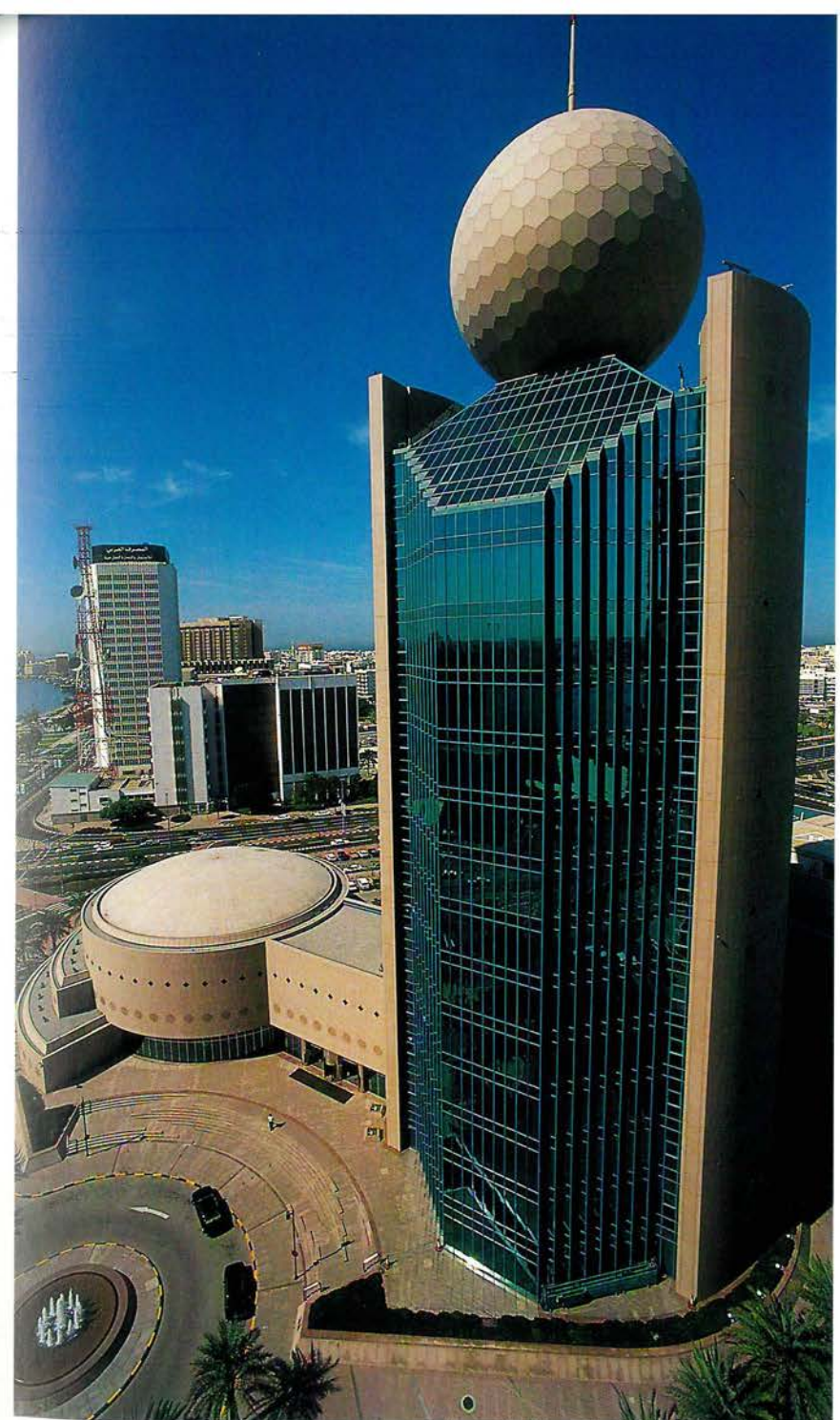
The cable point in Dubai provides communications to other global cable systems connected in Fujairah, which are FLAG, SE-ME-WE3, UAE-Iran cable and UAE-Oman terrestrial cable. The system will be able to accommodate enormous volumes of traffic, making it possible to carry broad band ISDN, internet, video-on demand and many other advanced services, due to the system's stable and highly reliable transmission technology.

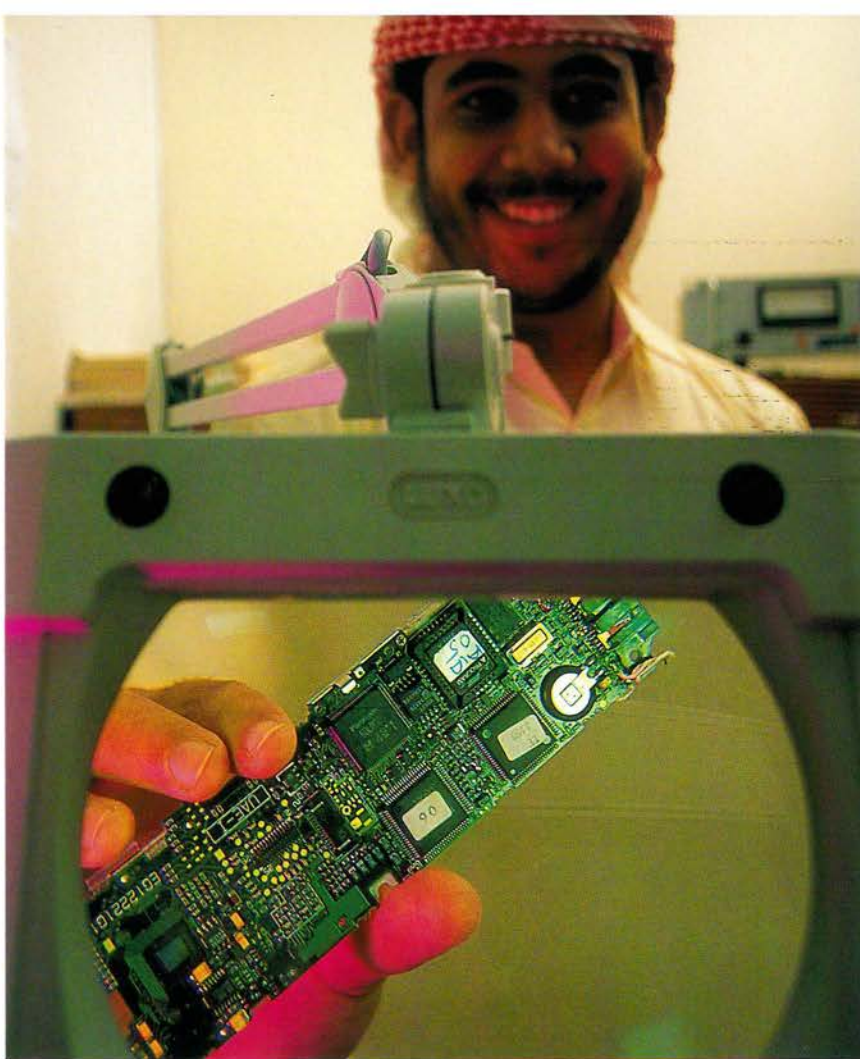
Cable television

A cable television network project is also being developed and implemented by ETISALAT. The network is planning nationwide coverage, however an initial pilot phase aims to provide services to 20,000 residential units in Abu Dhabi and Dubai by the end of 1998. ETISALAT will be using state-of-the-art technology in the project, which will be a 'true' cable network, with direct transmission of high-quality crystal-clear pictures through a cable television socket. The network will be able to provide both analogue and digital services.

Emiratization

ETISALAT is working on a policy to emiratise nearly half of its workforce by 2000. The number of UAE nationals in the corporation at present represent 23 per cent of the total staff and the company is engaged in an ambitious plan to increase this percentage to 46 per cent. A number of well-planned training programmes have been put in place to achieve this aim.





One such programme, designed to encourage nationals to take up top administrative and technical posts, started with technical and administrative training for secondary school graduates in the Emirates. Students were then sent to the United States to continue their university studies. Several batches have graduated from the ETISALAT Engineering College, which was established in 1989. Graduates are granted a certificate in communication engineering and computer and electronics engineering. The certificate is recognised as a university degree by the Ministry of Higher Education and international universities.

Another special programme to recruit university and higher institute graduates to the corporation, which provides one to two years of training for graduates to take up administrative posts, has also been successful. As a result, 80 per cent of the strategic administrative posts at the corporation are now occupied by nationals. Between 20 per cent and 25 per cent of secondary posts are also occupied by nationals.



LABOUR AND SOCIAL AFFAIRS

Official analysis of the December 1995 census concluded that the population of the UAE at that time was 2.41 million, a staggering increase of about 1 million between 1985 and 1995, at an average escalation of 100,000 people annually. However, the average annual population growth rate had actually decreased from 12.5 per cent between 1975-1980 to 5.6 per cent between 1985-1995. Nevertheless, if this average remains at the current level, the population will double within about 12.5 years. Population estimates for 1998 are in the region of 2.8 million.

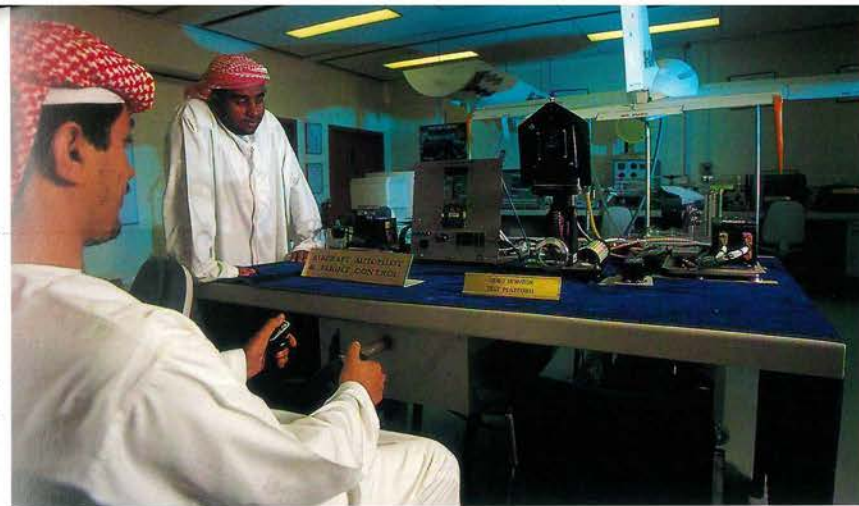
In line with the pace of development, the urban population rose from 15 per cent in the 1950s to 84 per cent in the 1990s. Population density increased from 7 people per square kilometre in 1975 to 13 per square kilometre in 1975 and to 28 per square kilometre in 1995.

Spiralling economic expansion over past decades brought an influx of immigrants since the UAE was obliged to rely on expatriate manpower to keep pace with development. As a result, there has been a steady decline in the proportion of UAE citizens in the total population over the course of the past 30 years. In 1968, when a census was carried out by the British, the country had a population of around 180,000, of whom 63.5 per cent were said to be nationals of the seven emirates, then known as the Trucial States, and 36.5 per cent expatriates. By 1975, the percentages had altered to 30 per cent citizens and 70 per cent expatriates, while succeeding years showed a further decline in the percentage of citizens as the population continued to grow.

In contrast, the labour force has doubled between 1985 and 1995 at an average annual growth rate of 6.7 per cent. If this rate continues, it will double again within about ten years. The ratio of the labour force to the population in 1995 was 73.4 per cent for males and 19.5 per cent for females, which averages at 55.4 per cent for both. These ratios are higher than the corresponding figures for 1985, when they were 69 per cent for males, 13.5 per cent for females and 49.6 per cent for both. The ratio of females to the total work force had increased from 9.6 per cent in 1985 to 11.7 per cent in 1995.

Given the demographic imbalance and the fact that the Emirates now has a growing indigenous well-educated workforce, the government has made human resources development the top priority of its political, economic and social objectives. At the same time, it is actively seeking to both maximise emiratization (the placing of UAE nationals in the workforce, replacing the currently-predominant expatriates) and minimise unemployment amongst UAE nationals.

Sheikh Zayed has continuously stressed the need for all citizens of the UAE to work together to realise their own potential and secure the future of the country:



We look forward to seeing in the future our sons and daughters playing a more active role, broadening their participation in the process of development and shouldering their share of the responsibilities, especially in the private sector, so as to lay the foundations for the success of this participation and its effectiveness.

At the same time, we are greatly concerned to raise the standing and dignity of the work ethic in our society, and to increase the percentage of citizens in the labour force. This can be achieved by following a realistic and well-planned approach that will improve performance and productivity, moving towards the long term goal of secure and comprehensive development.

Headway has been made in efforts to replace foreign labour with nationals in the public sector. However, emiratization in the private sector, a potentially fertile source of job opportunities, has met with some resistance. For instance, although prosperity has brought a rise in job opportunities, this has not always been in the sectors favoured by the indigenous labour force.

Between 1994 and 1997, trade, manufacturing, agriculture and real estate were the four leading sectors for employment growth, showing an annual average employment growth of 22.5 per cent, 10.5 per cent, 8 per cent and 5 per cent respectively.

Nevertheless, the Ministry of Labour and Social Affairs, having launched its drive to secure jobs for unemployed nationals in the private sector in April of 1997, has succeeded in arranging employment for 50 per cent of the qualified and trained UAE nationals listed with it, in companies covering different economic sectors. The number of UAE citizens seeking jobs in the sector and those who were registered with the Ministry increased from a few hundred in June 1997 to 2,000 by the end of 1997 and 2,500 by the end of February 1998.

Backed by Article 14 of the Labour Law and relevant Ministerial decrees, the Ministry has intensified its efforts to convince the private sector of the importance of giving preference to nationals. The problem is not only that the private sector has shown some reluctance to employ nationals, but nationals frequently prefer to work in the public sector because the perception is that it offers much higher salaries, more attractive financial benefits and shorter working hours.



Fujairah.





To address these issues, the Ministry holds seminars with all concerned parties participating. It also provides further training for potential recruits, as well as encouraging companies to provide in-house training for new staff.

The UAE's national workforce (as a percentage of the total workforce) is expected to reach 12.7 per cent by the year 2015, compared to 9.2 per cent in 1995. Estimates indicate that the ratio of national workforce to expatriate workforce will become 1:7 within two decades. It was 1:9 in 1995.

Social security

Whilst focusing on increasing employment and productivity, the UAE has not neglected the less fortunate in society, providing regular social welfare assistance for those in need. The Social Security Law, which came into effect in 1977, lists the following categories of people as being entitled to financial assistance from the state, if required.

- the totally disabled
- widows
- spinsters
- orphans
- those of a limited income
- married students
- the old
- divorcees
- women separated from their husbands
- the families of those serving prison sentences
- those married to foreign nationals

Exceptional cases are also considered for financial assistance. From 1986 to 1997, the Ministry spent Dh 5,860 million on social welfare. The total cost in 1997 was Dh 660 million. Of the families receiving social assistance, 25 per cent were in Abu Dhabi, 23 per cent in Dubai, 21 per cent in Sharjah, 7 per cent in Fujairah, 5 per cent in Ajman and 3 per cent in Umm al-Qaiwain.

The elderly were the largest group receiving aid, constituting 43 per cent of the total. They were followed by widows, divorcees, the deserted, the unmarried, expatriate wives, orphans, families of prisoners and married students.

Over the course of the last decade and a half, the total number of people receiving assistance has fallen, but, at the same time the average payment per recipient has increased sharply, in response to the rising cost of living.

The underlying philosophy behind the Social Security Law is that the state guarantees to assist individuals and families who may face particular problems, while at the same time trying to help them become productive members of society. To this end, the government is studying ways and means of assisting social welfare recipients to set up projects in the agricultural and commercial fields with state responsibility for marketing the products derived from these ventures.

EDUCATION

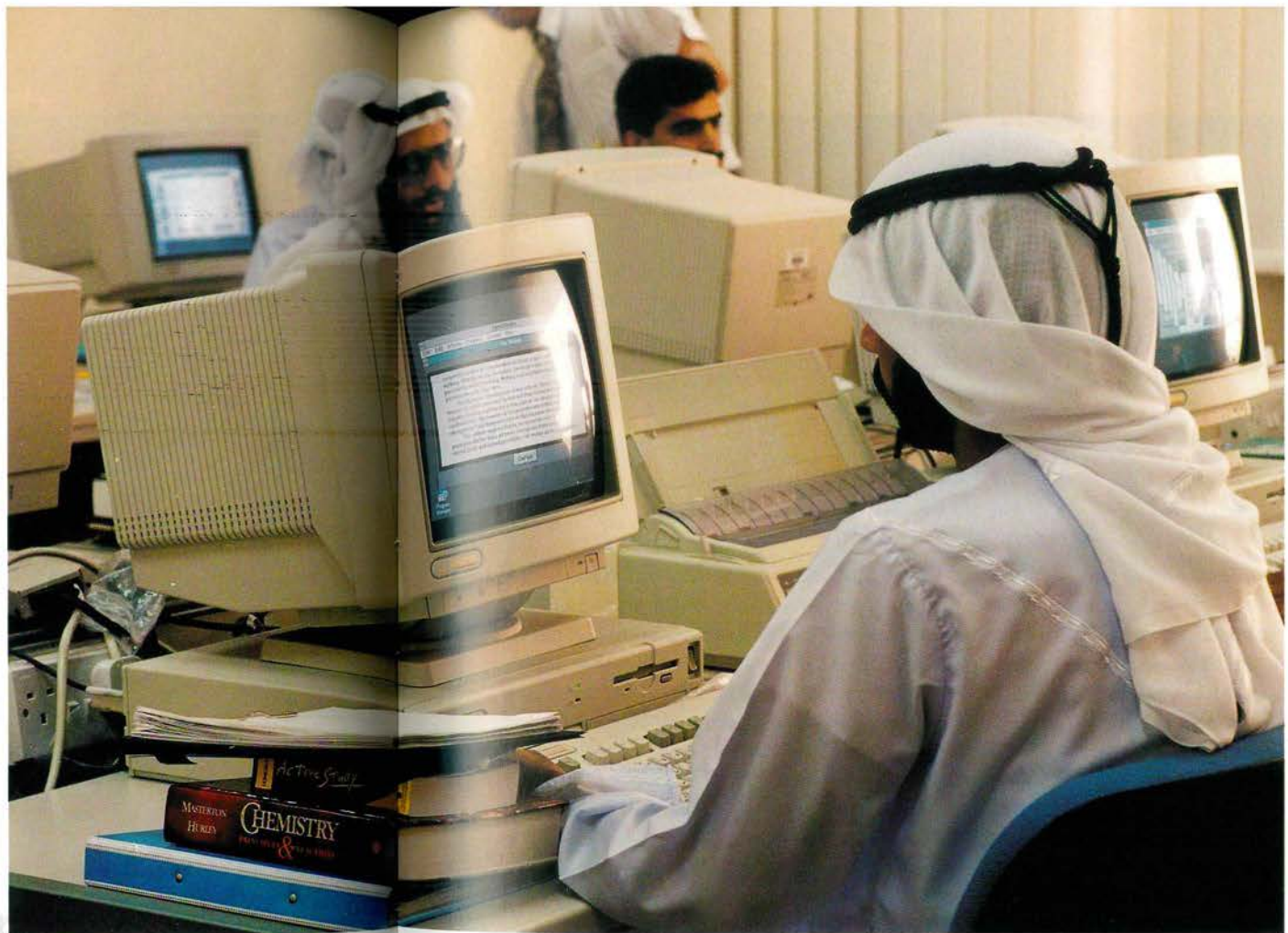
The UAE's youth, the 'real wealth of the nation' as Sheikh Zayed terms the new generation, can now benefit from educational opportunities that were denied to their parents. In 1971, when the state was formed, only a tiny minority of children had access to formal schooling, and of those the majority were boys. In the intervening years, the number of state schools has risen from 132 in 1972 to some 668 in 1997-98, and student numbers attending government schools have increased from 40,115 to 312,000 over the same period. The number of teaching staff at government schools has also grown steadily to meet this expansion, now standing at nearly 34,500.

Substantial development has also taken place in the private school sector which accounts for 38.2 per cent of the student population in the UAE. The number of private schools rose from 18 in 1972 to 400 in 1997-98, with the total number of students in private schools increasing from 3,583 to close to 300,000.

In addition, the UAE's youth have ready access to high-quality, third-level education following the establishment of the UAE University in 1977 and the Higher Colleges of Technology in 1987. In the decade since the establishment of the HCTs the number of students has increased 28-fold to cross the 7,000 barrier, compared to 239 students when the colleges were established. There are now nine colleges within the HCT network. Other universities have also opened in the UAE in recent years, including, in 1998, Zayed University for Women which has campuses in Abu Dhabi and Dubai, and generous grants are available for those wishing to study abroad. At present, over 1,000 students are on Ministry scholarships studying in 32 different countries. Vocational training institutes also provide technical training for jobseekers.

Most importantly, the comprehensive free education system extends equally to both sexes, and the female population in the UAE have rapidly taken advantage of the opportunities offered to them, so much so that they now constitute the greater portion of the student body (see Women).

The process of bringing the modern educational system in line with the requirements of the new millennium is supervised by the Ministry of Education and Youth in conjunction with the Ministry of Higher Education and Scientific Research.



New infrastructure

The great importance placed by the UAE on building a system which would provide education for all is reflected in the significant annual expenditure on education. In the fiscal year 1998 the educational sector's allocation was Dh 4.288 billion, with an additional sum of Dh 288 million for development projects. This allocation was up from Dh 3.19 billion in 1997.

In fact, the Ministry of Education, in conjunction with the Public Works Department will spend a total amount of Dh 1.305 billion on education-related infrastructural projects to be completed by 2002. The projects include construction of new premises for the Emirates University Faculty of Medicine and Health Science, costing Dh 25 million. Another Dh 28 million will be spent on construction of Higher Colleges of Technology buildings in Abu Dhabi and Al Ain. An additional Dh 8 million will be spent on irrigation networks and car parking facilities at HCT buildings in Abu Dhabi and Al Ain.



New schools are being constructed in a number of new residential areas in Abu Dhabi. In the Shahama area, two primary schools, one for boys, another for girls will be constructed at a cost of Dh 16.5 million each. Two similar schools in New Nahda area are proposed at a cost of Dh 19 million each. Two kindergartens in West Bahiya and Shahama will cost Dh 8 million and Dh 8.5 million respectively. Similar projects will be executed in Al Wajn, Al Hayer, Sweihan, Dalma, west Abu Dhabi and Al Ain.

Continuous expansion is necessary since an estimated 43 per cent of the national population is expected to be of school-going age by 2010. The school enrolment projections were prepared on the basis of nationality, taking the demographic profile of the national and non-national population into account. The most significant increase is expected to be seen in the number of pupils from the Emirates.

The national share of the school population is expected to increase from 40 per cent in 1989-90 to 56 per cent by 2010. School requirements were assessed accordingly, taking into consideration the Ministry of Education's recommendations on the number of pupils per class, classrooms per school and staff-student ratios. It is estimated that Abu Dhabi will require an additional 4,395 classrooms in government schools and 1,436 rooms in private schools.

Preparing for the new millennium

Having erected an impressive educational infrastructure and provided a comprehensive education for all its citizens, the UAE is now seeking to re-assess and develop educational curricula and teaching methods, to ensure that the UAE's citizens are adequately prepared to assist in the economic and social development of their country. In particular, the requirements of the labour marketplace must be taken into consideration when the curriculum is being re-evaluated.

The need to move away from 'merely managing' educational institutions 'to providing creative leadership for those institutions' was emphasised by Minister of Higher Education and Scientific Research Sheikh Nahyan bin Mubarak Al Nahyan, inaugurating a conference on 'Challenges of the Next Millennium: Education and Development of Human Resources', organised by the Emirates Centre for Strategic Studies and Research (ECSSR) in Abu Dhabi in May 1998.

The forum discussed strategies in education and training to prepare the workforce in the GCC countries for the challenges of the coming century. Sheikh Nahyan said the conference, besides being timely, would focus attention on a subject of deep concern to Sheikh Zayed, who has always stressed the fact that the key to prosperity lies in educating the people.

The essential goal for education for the next century, he said, is 'the development of skills and attitude for lifelong learning. No education, no matter how brilliantly designed and delivered, will last a lifetime in a world in which entire industries are created and wiped out in a few short years'.

'The greatest challenge to education and training systems everywhere in the world is how to prepare members of the labour force for active and continuous involvement in their own lifelong learning,' Sheikh Nahyan commented. 'The purpose of education must shift from focusing almost entirely on the acquisition of knowledge to the competence to use it. This would help to improve the quality of life and make for the overall development of the students' potential', he added.

Information technology

There is a great awareness in the UAE that information technology must be harnessed for the future progress of the country. To this end, ETISALAT and the Ministry of Education and Youth are launching a project to provide internet facilities in schools, in order to help students acquire technical knowledge of advancements in the telecommunication sector, at the same time creating a more interactive learning environment. The facility will be provided to both government and private schools. The facilities available for use under the ETISALAT project include accessibility to e-mail, distant learning services and a wide range of educational and research materials.

Internet and other IT systems are already in operation at third-level. In fact, the UAE University has been selected as the leading centre for applied technology in education in the Middle East by the United Nations Educational, Scientific and Cultural Organisation (UNESCO).

The selection was based mainly on the university's success in using technology-related applications in teaching physics and mathematics. The University's teaching staff developed special computer programmes based on the internet and other multimedia to encourage students to spend more time in the laboratories, help them interact during class and learn more about the laboratory research in which they are involved. The university, through UNESCO, has assisted several Arab universities, especially in Jordan and Kuwait, to develop their own teaching applications.

Literacy programmes

It is not just the youth that have had new educational opportunities opened up to them. The Adult Education Department of the Ministry of Education and Youth hopes to capitalise on the great strides made in bringing literacy to the general population in a relatively short period of time and aims at eradicating illiteracy by the year 2000. According to the 1995 census, the overall illiteracy rate had dropped to 15 per cent, compared to 79 per cent in 1968. The illiteracy rate among women has dropped more sharply than that of men.

The literacy programme is targeting mainly nationals aged between 10 and 40. There are currently 127 Adult Education Centres in the country, of which 29 offer morning classes; 17 of these are affiliated to the UAE Women's Associations, nine to the Social Development Centre and three to the Heritage Revival Society. The other 98 centres for men and women are located in different emirates at the Ministry of Education and Youth centres. There are more than 23,900 men and women students attending these centres.

In addition to two-year literacy programmes, classes have been arranged for adults who missed out on the advantage of adequate education in their youth. As well as Arabic reading, writing and mathematics, new subjects such as Islamic heritage, primary maintenance work, business administration, computer studies, English and family education are offered. According to the Ministry of Education and Youth, the new curriculum aims at raising students' awareness of economics and the relationship between production and development, as well as making adult students more environmentally conscious.

Handicapped

Article 16 of the Constitution stipulates that 'all necessary care should be provided to children and to the disabled'. Handicapped children are therefore furnished with the fullest education possible for each individual case, right up to university level, whilst a network of government-supported rehabilitation centres has been established to provide education, including vocational training, for the disabled.

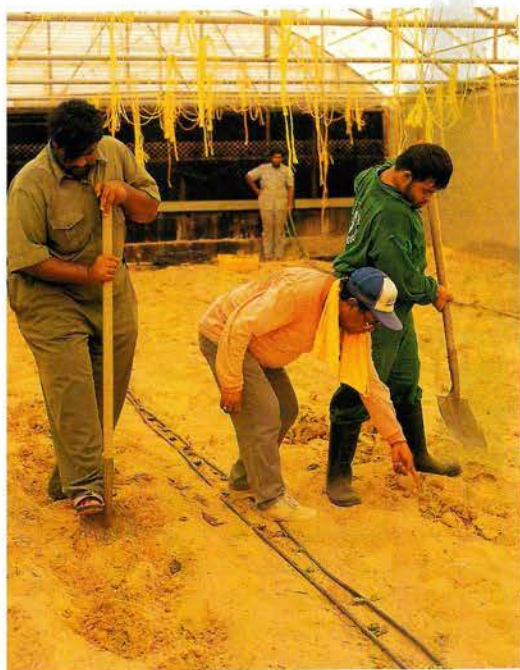
Sharjah City for Humanitarian Services has developed for itself a leading role in the rehabilitation of the disabled, not just in the UAE, but throughout the Arab world. The Emirates has also established an internationally-acclaimed, self-financing farm run by those who are challenged mentally or physically, the Zayed Agricultural Centre for the Disabled (see Agriculture).



HEALTH

Sheikh Zayed has always stressed that the most valuable resource in the country is its people and that their welfare is a major priority of the state. As a result of this commitment, unprecedented progress in medical care has taken place in the UAE since its inception. In 1971, there was little available to the general population by way of organised medical treatment: seven hospitals with 70 beds and 12 medical centres took care of the total population of the UAE. By 1998 all this had changed and the UAE's citizens could benefit from one of the best health care services in the world, largely free of charge. So much so that recent UN reports indicate that the UAE is one of the top eight countries in the Middle East and North Africa in the field of medical and child care.

Life expectancy has increased to 76 years for women and 74 years for men. Infant mortality among newborns has fallen to 9.44 per 1000, much less than the international target rate of 70 per 1000, whilst the child mortality rate has been reduced to 19 per 1,000, compared to an international rate of 89 per 1,000.



The statistics for medical institutions are equally as impressive. By 1998, 54 hospitals in the UAE were offering advanced health care services, 32 of which are under the direct control of the Ministry of Health, with a total of 6,877 beds. In the area of primary health care, 115 medical centres are operating in all parts of the country. The Ministry of Health has provided medical technology services in new fields like open heart surgery, organ transplant, cancer therapy, traditional medicine, fertility clinics and other services. In addition, several specialised centres have been opened to serve the elderly and disabled persons. Today, there is one doctor to every 600 people and one nurse for every 300, totalling 4,000 doctors (of which 2,118 work in Ministry hospitals) and 6,000 nurses (of which 5,492 work in Ministry hospitals).

In 1998, the Public Works Department completed work at the Abu Dhabi Medical Zone, which includes Al Jazira and Khalifa hospitals, besides setting up clinics in Abu Dhabi, Samha, Al Hayer, Bani Yas, Al Rahba and Al Manhal, at a total cost of Dh 204 million, as well as construction of blood banks in Abu Dhabi and Al Ain. The department is also constructing a new Dh 80 million hospital for the handicapped and a 480-bed paediatric hospital, costing Dh 431 million.

There is a complete awareness, however, that quality of service requires a focus beyond the mere building of infrastructure. To address this issue, in co-ordination with WHO and other international organisations, the Ministry of Health has devised comprehensive quality assurance programmes to meet the challenges faced by the health sector as the country moves forward to the new millennium.

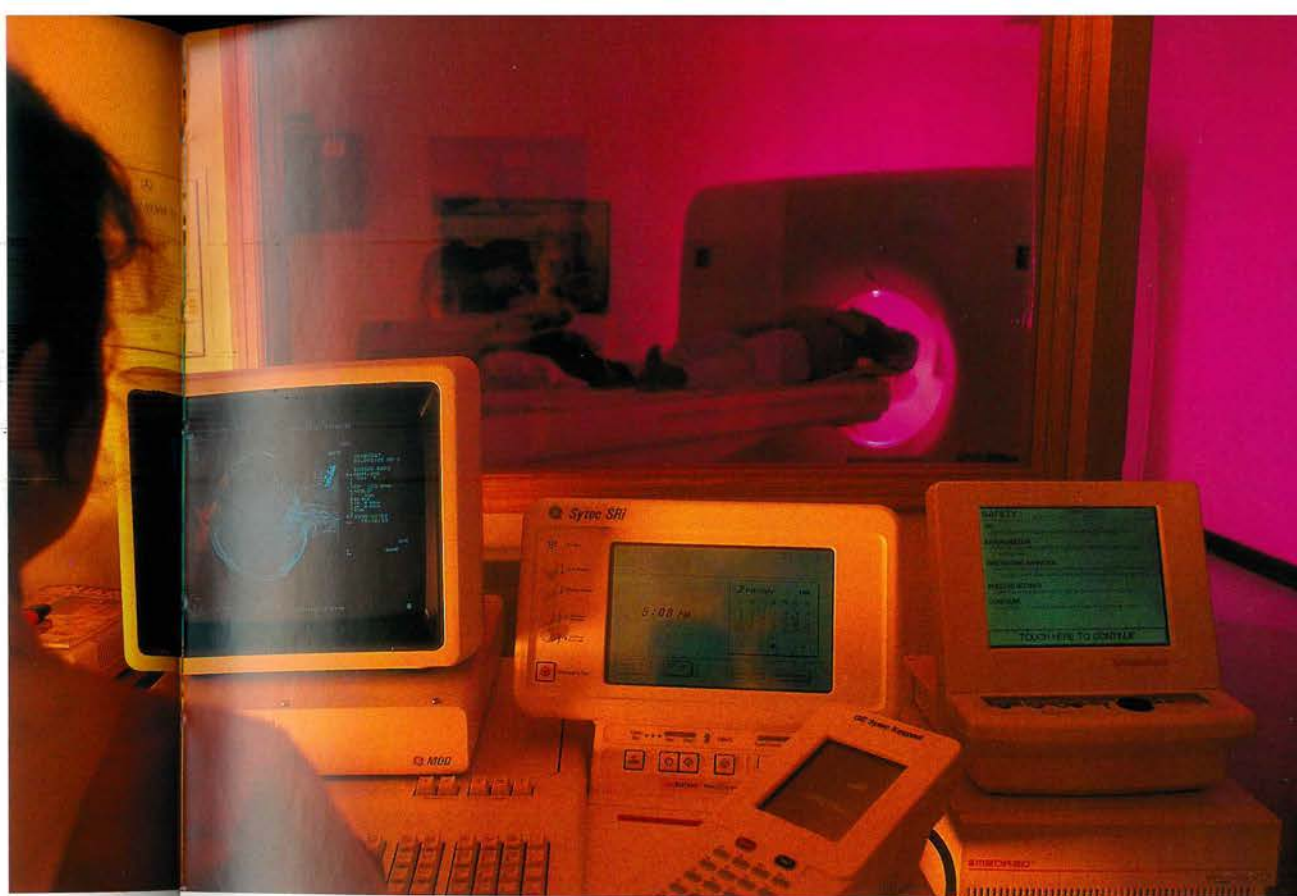
The new health policy is aimed at providing quality healthcare through an integrated network of primary, secondary, specialist and rehabilitative healthcare programmes. A special focus will be on introducing alternative medicine, at the forefront of which is herbal medicine. The new policy envisages prevention and controlling of special health problems, introducing state-of-the-art technologies in health services, and promoting scientific research, medical and field surveys.

Preventive medicine

The UAE health care system already focuses very strongly on preventive medicine, whether it be immunisation, health screening, public awareness, research or educational programmes.

In 1998, 750,000 children in the Emirates will be vaccinated against polio and measles. The national health programme, which starts in October, subscribes to the WHO's global goal to eradicate polio and measles by the early part of the next century.

In a major move towards widening its comprehensive immunisation programme, the Ministry of Health will also be introducing the Haemophilus Influenzae B (HiB) vaccine in the UAE from January 1999. The vaccine will cover all newborn infants in the country as part of efforts to further reduce infant mortality from the currently low figure of nine per 1,000 babies.



The new vaccine, introduced in the US fairly recently and in Europe four years ago, will offer further protection to newborns against a host of major diseases, including meningitis, pneumonia, epiglottitis, arthritis and pericarditis. The vaccine, administered from the age of two months in three doses up to six months, with a booster shot at 18 months, will bring about a further drop in mortality rates. It is currently available at some private sector hospitals in the country and administered on request, or on the advice of paediatricians.

The UAE already has one of the lowest infant mortality and perinatal mortality rates in the region: perinatal mortality rates are 2 per 100,000 as against 21 per 100,000 in the Middle East and Eastern Mediterranean region. UNICEF's 'State of the World's Children 1998' Report placed the UAE in 139th position for its under five mortality rate (U5MR) of 18 in 1996. (Ranking is done in descending order of mortality figures). The UAE's U5MR in 1996 was in sharp contrast to the situation in 1960 when the mortality rate was 240, the report said, defining the U5MR as the probability of dying between birth and exactly 5 years of age per 1,000 live births. The report showed the percentage of infants with low birth weight during 1990-1994 to be 6 per cent and the percentage of children between the age of 20-23 months who were still breast-feeding to be 26 per cent during 1990-1996.



Not content with these impressive figures, the Ministry of Health and its new Preventive Medicine complex in Abu Dhabi is planning to initiate several programmes aimed at controlling and preventing diseases. These include a programme for regular detection of congenital diseases, more studies and prevention programmes for breast cancer, including wider screening facilities, research into rare infant diseases, and hypothyroidism.

The screening and other preventive programmes will begin in the capital and will spread to other emirates through the Maternity and Child Care Department's nine specialised centres. These are operated with strong co-operation from the UAE Women's Federation under the guidance of HH Sheikha Fatima bint Mubarak, wife of the President and Chairwoman of the Federation (see Women).

The Ministry also promotes health awareness among the community as a whole, especially as far as hereditary diseases are concerned and the pitfalls of close consanguinity.

Causes of death

Ministry of Health statistics released at the end of 1997 indicate that chronic and non-communicable diseases have overtaken infectious diseases as the major cause of death in the UAE. Nearly half (46.6 per cent) of all reported deaths are due to cardiovascular disorders, malignant neoplasms and accidents. Cardiovascular disease has emerged as the leading cause of death throughout the last eight years, accounting for 23.8 per cent of the 4,747 reported deaths in 1996. Startlingly, the number of cardiovascular-related cases jumped from 524 deaths (14.2 per cent of total) in 1989 to 1,129 in 1996. The number of male deaths due to cardiovascular disease has risen from 363 in 1989 to 773 in 1996. In the same period, the number of female deaths has increased from 161 to 356.

Accidental deaths resulted in 706 deaths in 1996, accounting for 14.9 per cent of the total. This figure was slightly lower than in 1995 when 787 casualties were reported. Cancer-related deaths are in third place, accounting for 377 deaths (7.9 per cent), higher than the 1995 figure of 304 deaths (6.3 per cent). Other non-communicable and chronic diseases such as diabetes mellitus and congenital anomalies have also emerged as significant causes of mortality during the same period of time.

The Ministry, recognising the close relationship between lifestyle, health and disease, is encouraging research in this field, and will also address many social and environmental conditions, such as patterns of food production and marketing, availability of community facilities encouraging physical activity. The Ministry will also examine marketing of tobacco products, especially tobacco advertising in the fields of sports and culture.

No smoking campaign

The Ministry of Health has begun preparations to set up a 'Quit Smoking' Unit at the Departments of Preventive Medicine in each of the nine medical districts throughout the country.

Initially, a 'Quit Smoking' unit will be established in the new Abu Dhabi Preventive Health Department. The other eight units will be opened following evaluation of the success of the initial unit in Abu Dhabi. The Units will aim to reduce the prevalence of smoking and associated illnesses and death, and to encourage people to adopt a healthier lifestyle, as well as to support smoke-free policies.

The main objectives of the Units are to reduce health risks by motivating and assisting smokers to quit, and prevention of tobacco use in adolescents. These units will target all smokers in the community who are willing to quit smoking, using Arabic, English and Urdu languages. The units will be provided with all necessary personnel and equipment, in addition to auxiliary materials, such as posters, logos, pamphlets and handouts.

Personnel will include physicians (both cardiac and chest), psychologists, dieticians, nurses, public health specialists, social workers and others. Strategies for the units will include clinical smoking cessation techniques, which will be used through counselling group sessions, as well as nicotine replacement therapy.

The UAE also participated in the 'Gulf No-Tobacco Week' in October, as agreed by the Gulf Anti-Smoking Committee. Several programmes aimed at highlighting problems associated with smoking, initiating quit smoking clinics, and outlining the disadvantages of smoking from an early age were held with a view to increasing general awareness.

The Ministry has also launched a nationwide study of smoking habits and attitudes in the country. The study will cover 1,500 UAE national households. Research is ongoing to include lessons on the dangers of smoking in the school curriculum, and banning smoking in public places.

In addition, the UAE raised import tax on cigarettes to 70 per cent, with plans to further increase it over the next few years, in order to curtail smoking as part of the GCC health plan to curb the smoking habit in the region.

WOMEN

What women have accomplished in the Emirates in only a short space of time makes me both happy and content. We sowed our seeds yesterday, and today the fruit has already begun to appear. We praise God for the role that women play in our society, and it is clear that this role is beneficial both for present and future generations.

Sheikh Zayed.

The women of the UAE have always played a key role in local society. This was, in part, as mothers and as centres of the family, roles which remain of great significance today. At the same time, the nature of traditional society in the Emirates provided them with other significant responsibilities as well. In the nomadic and agricultural sectors of the community, women were often responsible for looking after livestock and crops. With menfolk frequently away for weeks, or even months at a time, engaged in the fishing and pearling industries, the women shouldered the entire burden of bringing up the family, with all the hardships often entailed in what was, until recent decades, a hard life in a harsh and unforgiving land.

There was a danger as oil began to flow and development accelerated, and as the male population moved to take advantage of new opportunities, especially in education, that the UAE's women might be left behind. The number of girls in school, for example, was significantly lower than that of boys in 1971, while, with their natural role as the custodians and teachers of family and national heritage, there was, inevitably, the potential for a clash between traditional modes of life and the new features of culture and society associated with the process of development.

There is ample evidence that this did not take place and the women of the UAE, with the active support of their fathers, husbands and brothers, are contributing fully to the building of one of the most rapidly developing states in the world.

Legal guarantees

The UAE Constitution, adopted on the establishment of the state, safeguards the rights of women by ensuring them equality with men. They enjoy the same legal, status, claim to titles, access to education, the right to practise professions etc., and are guaranteed the same access to employment, health and family welfare facilities. In accordance with the rights and privileges laid down in Islam, on which the Constitution is based, the rights of women with regard to the inheritance of property are also guaranteed.

The Constitution notes:

The family is the basis of society, which shall be responsible for protecting childhood and motherhood. Laws shall be formulated in all fields to observe this protection and care, in a way which safeguards the dignity of women, preserves their identity and secures for them the conditions appropriate for a prosperous life and suitable work which is in accordance with their nature and capabilities as mothers and wives and as workers.

Constitutional guarantees have been effectively implemented by legislation. For example, under the terms of the Labour Law, which governs employment, discrimination between men and women in terms of equal pay for equal work is prohibited. Moreover, the drafters of the Labour Law have taken into account the fact that special conditions apply to women as regards maternity leave, *sharia* law obligations on the death of a spouse, and accompaniment of a parent or child abroad for medical treatment.



Career Fair at Dubai's Women's College.

Women in education

Women in the Emirates have fervently embraced the educational opportunities offered to them, at the same time laying the basis for their considerable impact on Emirati society. From a time when few women received formal schooling, the UAE has arrived at a situation where around 99.4 per cent of girls were enrolled in primary schools following the introduction of compulsory education. At the intermediate level, 98.1 per cent of girls and 93.1 per cent of boys in this age group are enrolled. The percentage of girls is fast surpassing that of boys in the secondary stage, representing 70 per cent and 61.4 per cent respectively.



Girls are also ahead academically. Results of the General Secondary School Examinations for the literary stream in 1998 showed that out of 14 students securing the top 10 positions, 12 were girls. Girls also secured around half of the top 10 positions in the science stream.

At higher level, approximately 70 per cent of the total student enrolment at university is female. Of the 24,825 students now enrolled at the University and the HCTs, 15,335, or 63 per cent, are women. Despite these impressive figures some women have had difficulty attending third-level education because of having to share facilities with their male counterparts. The decision early in 1998 to establish the Zayed University for Women in Abu Dhabi and Dubai will go a long way to alleviating any problems in this regard.

Behind this dramatic progress lies another success story – a staggering decline in illiteracy among UAE women from 65.6 per cent in 1990 to 11.3 per cent in 1998. This is attributed to sustained efforts by the Ministry of Education and the UAE Women's Federation, which are working together to achieve 100 per cent literacy among UAE women by the year 2000.

Seventeen of the Ministry's adult education centres are affiliated to the Women's Federation and women represent 57.2 per cent of the total number of adults registered at adult education centres throughout the country. As well as literacy classes, the centres offer schooling from primary to secondary levels, in addition to education services in health, social affairs, heritage and culture. The centres also provide vocational training to help women find jobs and run a special programme for the preservation of traditional handicrafts.

The fact that kindergarten commences at four years of age, enabling mothers to attend classes or work if they wish to do so, has made a significant difference to women. Kindergarten services have also expanded rapidly. In the 1980/81 academic year, for example, the Ministry of Education was responsible for the supervision of a total of 221 kindergarten classrooms, attended by a total of 6,514 children. By the 1991/92 academic year, the number of classrooms had risen to 1,999 with 49,064 children, an increase of 253 per cent.

Women's Federation

There is little doubt that the UAE's Women's Federation has played a hugely significant role in helping the women of the UAE realise their full potential. In particular, the Federation's Chairwoman, First Lady, HH Sheikha Fatima bint Mubarak, has worked tirelessly to ensure that the women of the country are able to take their rightful place alongside their menfolk in the building of a new society.

Sheikha Fatima has not only been the leader of the women's movement in the Emirates, she was also its founder. It was at her prompting that the first women's association in the country, the Abu Dhabi Women's Association, was formed in February 1973. A couple of years later, in 1975, again at her initiative, the associations in the country's seven emirates were brought together under the umbrella of the UAE Women's Federation, a body which she has served as Chairwoman ever since.

The Federation currently has the following member associations: the Abu Dhabi Women's Development Society, the Dubai Women's Development Society, the Sharjah Women's Development Society, the Umm al-Mou'meneen Society in Ajman, the Umm al-Qaiwain Women's Development Society and the Ras al-Khaimah Women's Development Society. It is also responsible for a centre in Abu Dhabi for the revival of local handicrafts, many of which are traditionally made by women.

The UAE Women's Federation has a number of committees to run its affairs and develop interests and activities. These cover topics such as Religious Affairs, Mother and Child Care, Social Affairs, Cultural Affairs, Sports, Heritage and the Arts.

Depending on the geographical size of the emirate, the individual societies may have more than one branch, and there are now a total of 31 branches of the six societies, many operating in remote areas of the country. The Abu Dhabi Women's Development Society, for example, has a branch with its own extensive premises on the island of Dalma, around 180 kilometres west of Abu Dhabi city.

The individual societies and their branches have their own wide range of educational and cultural, social and sporting activities, with impressive facilities including well-stocked libraries, nurseries and handicraft centres.

Population by Gender within Emirates

	Males		Females		Total	
	1996	1997	1996	1997	1996	1997
Abu Dhabi	655	705	297	312	952	1017
Dubai	483	528	212	229	695	757
Sharjah	260	278	152	161	412	439
Ajman	73	82	50	55	123	137
Umm al-Qaiwain	21	23	15	16	36	39
Ras al-Khaimah	86	89	61	63	147	152
Fujairah	47	50	31	33	78	83
Grand Total	1625	1755	818	869	2443	2624

Source: Ministry of Planning *Preliminary Estimates

Through the UAE Women's Federation, the individual associations contribute to the drawing up of comprehensive national plans for the continued progress of the women's movement. The Federation, which is funded by the government, is an autonomous legal body and is empowered to represent the country's women, of all communities, in discussions with Ministries and other government departments and institutions. It is also responsible for suggesting new legislation, or amendments to existing laws, such as extension of maternity leave.

Sheikh Zayed inaugurated the new premises of the Women's Federation in April 1998 at celebrations attended by Supreme Council members, the rulers of the emirates, and senior officials. Construction of the 8,000 square metres complex started on 20 January 1995, on the instructions of Sheikh Zayed, and was completed on 28 February 1998, at a cost of Dh 32 million. The building, designed in Arab style, combines originality with opulence in a three-storey structure. The ground floor provides space for the offices of the Gulf Co-ordination Committee, a theatre with 400 seats equipped with the most advanced technical and electronic systems, and a number of reception halls.

At the international level, the UAE has played an active role in the global women's movement ever since it was established in 1971, always taking care to ensure that proper attention is paid to the recognition of the differences between religions, cultures and traditions. The UAE strongly believes that Islam, the state religion, offers guarantees for the status of women that can provide a useful example to the rest of the world. Within this context the Federation has participated in all of the major international women's conferences of the last couple of decades, including the 1995 conference in Beijing. It also participated in all regional forums for women and hosted several conferences and seminars on women in Abu Dhabi.

Health care for women

The extension of vastly improved health care since the foundation of the state and a huge improvement in standards of living has meant that there has been a consequent decline in disease and in pre- and post-natal female mortality.

A World Health Organisation (WHO) report issued in 1998 states that 90 per cent of UAE women received skilled attendance from a doctor or midwife at delivery. This percentage equals attendance rates in developed countries and has prompted a decline in the maternal death rate in the UAE to around 2:100,000.

The UAE's Maternity and Child Care Department of the Ministry of Health has run many programmes to educate pregnant women and to take care of their physical and psychological needs not only during delivery, but also in pre- and post-natal periods. The Department's nine specialised centres are operated with strong co-operation from the UAE Women's Federation. Of great significance also are the smaller decentralised advice centres which were instituted in the early 1980s and now number over 60.



Life expectancy for women has increased significantly, with the result that there has been an increase in the percentage of women in the population. Although all the reasons for this increase are not fully understood, the change is notable. In 1980, around 31 per cent of the population were women. By 1996, however, women had risen to 33.5 per cent of the population, a figure that remains roughly accurate today, according to the latest population estimates. With a more balanced population, social stability and cohesiveness are themselves enhanced, something considered by the government to be of great importance in both the short term and for the long-term future of the country.

A rising population with an increasing percentage of women, together with a rapid expansion of the educational opportunities available, has coincided with a gradual change in traditional attitudes towards the role of women in society. As a result, women in the UAE are rapidly taking up a significantly more active role in all aspects of national life, not least in the workplace, where female employment has grown dramatically.



Women in the workforce

While, in accordance with the traditional norms of UAE society, there remains a strong emphasis on the role of a woman as a mother, the rising level of female literacy has also made it possible for more of the country's women to enter the employment market, something of particular importance in a country which is still, to a very considerable extent, dependent on an immigrant labour force.

Women now represent nearly 12 per cent of the total workforce. While women in work can still be found primarily in occupations like health (where women account for 54.3 per cent of the total number of employees) and education (100 per cent of nursery school teachers, 55 per cent of primary school teachers and 65 per cent of intermediate teachers are women), there is an increasing trend for female employment in a wide range of other sectors. This occurs not only in the government sector where 40 per cent of total employees and 27 per cent at decision-making level are women, but also in areas such as banking and business.

Contrary to the common but erroneous impression that may be held in other countries about the women of the Emirates, virtually no occupation is closed to them on grounds of societal prohibitions, and the UAE University and HCTs are producing women graduates in disciplines such as the arts, engineering, sciences, including environmental sciences, media and communications, as well as computer technology. One of the proudest achievements of the country's womenfolk is its highly trained corps of policewomen and the women's corps of the Armed Forces, whilst women also figure prominently among the UAE's growing number of artists, poets and writers. In 1998, the first woman air traffic controller, a UAE national, was appointed at Dubai International Airport, having qualified at Dubai Aviation College.

The efforts of Sheikha Fatima to ensure that the women of the UAE enjoy proper access to opportunities for education and employment have reaped considerable rewards. Much remains to be done, however, partly because of constraints placed on female employment by social attitudes. Some UAE men, for example, are opposed to women working at all, while others will approve of female members of their family only working in areas of activity in which they do not come into contact with men. While women's participation in education exceeds that of men, their share in the workforce is still relatively weak and the traditions that can hold them back remain strong.

Women from wealthier families, who have a better chance of higher education, often fail to realise their full potential. Most educated women prefer jobs more suited to their social status rather than jobs consistent with their qualifications or ability. Despite all the incentives and official encouragement given to them to continue education, many young women and girls leave school early to marry and perhaps raise children.

These attitudes, however, are changing, partly as a result of the government's active encouragement of female employment.

Women and marriage

In order to provide advice on topics relating to family matters, including the legal rights of women, Sheikha Fatima has established a special Office of Women's Affairs at the Abu Dhabi Women's Society, whose function is to provide assistance and counselling to all those in need, including, if necessary, the provision of free legal advice and representation in courts of law.

One potentially disturbing factor for the country's social cohesion over the last few years, of particular importance to the country's women, has been the growing practice among young UAE men of marrying foreign brides. The reasons for this are manifold. Of major significance, however, was the impact of the country's new wealth upon the old and time-honoured system of dowry payments at the time of marriage.

Once modest, even nominal, the scale of these payments, and the cost of weddings themselves, soared as the people of the UAE enjoyed the fruits of their economic prosperity, and for some families, quite simply, a foreign bride was a more easily accepted economic option.

A natural corollary to the practice of men taking foreign brides was the fact that many young UAE women found themselves without suitable young UAE men as partners, while prevailing cultural and social norms meant that, for them, the option of a foreign husband was not available. The issue is, of course, one of great complexity, and one which it is impossible to solve through a simple piece of legislation.

Marriage Fund

Recognising that something should be done in order to counteract the damaging effects of foreign marriages not only on UAE women, but upon UAE society as a whole, Sheikh Zayed decreed the creation of a special Marriage Fund, financed by the government, which offers substantial long-term loans (up to Dh 70,000) to young UAE couples wishing to get married, in order to defray the costs of getting started in life.

At the same time Sheikh Zayed has waged a vocal, and successful, campaign against the practice of high dowries and extravagant weddings. One development in this sphere was a joint wedding ceremony on 6 August at Bani Yas, organised by the Marriage Fund in association with the UAE Heritage Revival Society. Five couples from the Manaheel tribe were married in a modest traditional wedding. Other group weddings are also taking place.

The figures reveal that in 1997 the Marriage Fund extended grants to 5,147 nationals in Abu Dhabi totalling Dh 360,290,000, which accounted for 37 per cent of the total expenditure of the Fund. Abu Dhabi led with 2,575 marriages, followed by Al Ain at 2,211 and the Western Region at 361.

In Abu Dhabi, the number of UAE men marrying national women through assistance of the Fund increased from 150 in 1993 to 1,415 in 1997. The number of nation-wide beneficiaries from 1992 to 1997 totalled 14,517 with a total expenditure of Dh 950 million.

In the five years since its establishment, the Fund has succeeded in reducing the rate of marriage to foreign women by 13 per cent. The Fund is now planning a new strategy to become a comprehensive social organisation concerned with family well-being in all its aspects.

The main aim is to ensure the stability of the family, which is the basic element in society. As part of the new strategy the Marriage Fund is setting up a family council to mediate in marital conflicts. The Council will mediate on the basis of complaints received directly from the involved partners or cases referred by the courts. It is also planning a hot line which will answer questions over the telephone on marriage disputes and family problems.



Women in politics

As part of plans to involve the country's women more actively in the political process, a selected number of women will begin to attend meetings of the Federal National Council. Sheikha Fatima informed Women's Federation Council members in June 1998 that a special committee with representatives of each of the member associations would present lists of women candidates to attend the sessions of the Federal National Council, in order to increase women's political awareness.

The 40-member FNC is, at the time of writing, all male. In 1997, Sheikha Fatima called for the creation of more opportunities for women to play a part in the public political process, one of her suggestions being the appointment of women members to the FNC.

Accolades for Sheikha Fatima

In December 1997, Sheikha Fatima was honoured simultaneously by five organisations of the United Nations system in recognition of her tireless efforts in the sphere of development of women in the UAE. The accolades not only represent international recognition for Sheikha Fatima's leadership of the UAE women's movement for over a quarter of a century, but also represent an expression of recognition and commendation from the UN system for the UAE government and people.

A plaque presented to Sheikha Fatima from the United Nations Children's Fund (UNICEF) states that the organisation is pleased to honour her 'in recognition of her enlightened leadership and dedicated commitment to the cause of promoting the welfare and well-being of women and children in the United Arab Emirates'.

A commendation from the World Health Organisation (Regional Office for the Eastern Mediterranean) states that Sheikha Fatima is well known 'for her outstanding social work and her efforts to support all women's activities in her country and the surrounding areas'.

The citation from the UN Population Fund (UNFPA), personally presented by the Fund's Executive Director, Dr Nafis Sadik, who is also Under Secretary General of the United Nations, states that it is 'in recognition of 25 years of dedicated efforts to reach out to women and their families, bringing lasting changes to their lives through the power of education, (and) promoting a new generation of voluntary organisations committed to the education of the girl child and to community service'.

The Executive Co-ordinator for the UN Volunteers Programme, Dr Brenda Gael McSweeney, in a statement issued to coincide with International Volunteers Day on 5 December, noted that Sheikha Fatima 'has provided both personal and financial support for non-governmental and civil society organisations, to further community participation in developmental and humanitarian assistance to the needy.'

Her achievements in this and other fields 'represent par excellence the spirit of voluntary service which UNV has been promoting tirelessly for over a quarter of a century. This International Volunteers Day, therefore, provides a perfect opportunity to give due recognition to the invaluable work and indomitable spirit of Her Highness Sheikha Fatima,' she said.

United Nations Organisation for Women (UNIFEM), in a lengthy citation explaining its reasons for honouring Sheikha Fatima, noted that through her initiative of establishing the UAE Women's Federation, she recognised 'that it was only by organising women that a real start could be made in their advancement and development. She articulated the aspirations of the Emirati women and channelled these through the Women's Federation, as the vehicle to advance the status of women in society and help them to achieve the full realisation of their capabilities'. . . After consolidating the women's movement and giving it a sense of direction at the national level, Sheikha Fatima led the Women's Federation towards taking regional and global perspectives into account.'

With the strong support of Sheikh Zayed and the UAE government, much has been achieved in advancing the status of women since the establishment of the state. As in other countries across the globe, men still have an advantage in terms of political, economic and social power, but attitudes are changing and equality of opportunity is fast developing.



THE PAST

The area now comprising the UAE includes the oldest rock in the Arabian peninsula, with the Hajar Mountains dating back over 200 million years. The mountains themselves, rugged massifs of rocks, brown, green, red and grey in colour, provide some of the most impressive scenery in the country, with deeply cut wadis (valleys) where pools of water can be found even in the heat of summer. But the rocks are important not just for their visual impact. Here and elsewhere they furnish us with vital clues to the region's past.

Discoveries of unique marine fossils at sites like Qarn Nazwa (Fossil Rock) near Dhaid provide interesting information regarding the marine environment of the emirates during the Cretaceous period. However, over the past few years, studies on more recent rocks, dating from the Miocene period, about six to eight million years old, in the Western Region of Abu Dhabi, have brought to light a range of particularly fascinating fossils.

From these rocks, known as the Baynunah Formation by scientists, after the area in which they are located, have come fossils of land and river-dwelling animals such as ancestors of elephants, horses, hippopotami, sabre-tooth cats and others, as well as freshwater reptiles like crocodiles and turtles. Some resemble fossils from Africa and Asia, supporting the theory that this area provided a 'land-bridge' between these continents. Nowhere else in Arabia have fossils of this period been found. The presence of the fossils shows that the area must have been fertile, with large, slow-moving rivers, and substantial rainfall, similar to today's African savannahs.

Man probably arrived in the land now known as the UAE around nine or ten thousand years ago. Some of the earliest sites have been found on offshore islands like Merawah and Ghagha', where fine flint arrowheads dating back around 7,000 years have been discovered. Along the Arabian Gulf coast in Ajman, Sharjah, Umm al-Qaiwain and Jazirat al-Hamra in Ras al-Khaimah and on the island of Dalma, the remains of small fishing communities have also been found. Sherds of pottery of a type known from the 'Ubaid culture in



Mesopotamia show that these people had trading links to the northern Gulf – evidence of the early beginnings of the country's continuing tradition of maritime commerce.

The earliest large-scale archaeological remains date back to the period from c. 3,200 BC to 2,800 BC, about 5,000 years ago. On the foothills and slopes of Jebel Hafit and Qarn bint Saud, near Al Ain, as well as on the neighbouring Hajar Mountains, hundreds of stone tombs from this period have been discovered, showing a sophisticated pattern of construction that could only have been undertaken by a well-organised and settled society. These people, too, traded with Mesopotamia, and Baluchistan. The reason for that trade is clear: copper implements and nearby mines show the people were mining and smelting copper. Cuneiform tablets from the Sumerian empire refer to the import of copper from 'Magan', now understood to have been an area which included the present-day UAE and the Hajar Mountains. The Jebel Hafit people also grew a variety of crops like wheat, barley, melons, sorghum and dates, evidence of a still fertile climate.

One hundred and sixty kilometres due west of Al Ain, on the coast at Umm al-Nar, a small island adjacent to Abu Dhabi, the site of a port has been found that must have been a focal point of the trade, while at Tell Abraq, in Umm al-Qaiwain, a massive mound has yielded evidence of continuous occupation from around 2,500 BC to 500 BC.



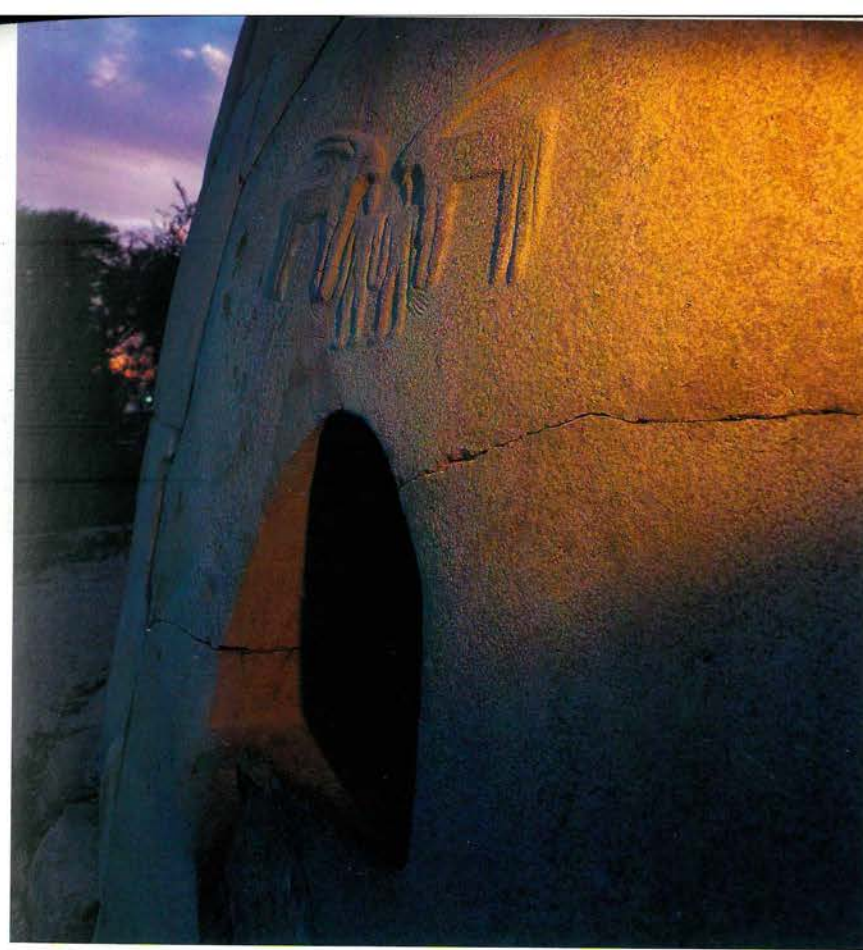


The excavation of Tell Abraq has revealed several layers of construction, the earliest originating in the Bronze Age period. The principal structure is a tower with 7-metre high walls and a well in the middle, which must have represented a massive stronghold dominating the coastal plain, perhaps the home of one of the rulers of Magan referred to in the ancient texts (see report on recent excavations at Tell Abraq).

Other archaeological sites that are more than 3,000 years old have been found all over the country, at Bidya and Bithna in Fujairah, at Shimal and Ghalilah in Ras al-Khaimah, at Ras Ghanadha and Qattarah in Abu Dhabi, and Umm Suqeim in Dubai. They show that the people in that long-off past enjoyed a sophisticated lifestyle, trading along desert and marine routes with other civilisations hundreds of kilometres away. It is perhaps no coincidence that at Umm al-Nar the earliest evidence has yet been found of the domestication of that 'ship of the desert', the camel, dating back over 4,000 years.

Many of the finds from the settlements and tombs are now on display at the UAE's many fine museums. The museums hold evidence, too, of later discoveries. An Iron Age village from around 1,000 BC has been uncovered at Hili, near Al Ain, which has survived almost intact under the sand dunes. From around 300 BC, there was a settlement at Mileiha, near Dhaid, that was heavily influenced by the ancient Greeks, where pottery from the island of Rhodes has been found. At Ad Door, near Umm al-Qaiwain, an ancient temple dating to around 100 BC to 100 AD has been uncovered, as well as more evidence of substantial international trade – pottery from India and Mesopotamia, glass and coins from the Roman Empire.

Trading continued to characterise the lifestyle of the people. Settlements at Jumeirah, in Dubai, show evidence of Sassanian links in the fifth and sixth centuries AD, while on Sir Bani Yas island, a major pre-Islamic Christian religious complex has been found. Over on the East Coast at Dibba, a great port existed for several hundred years until the early days of Islam, at the beginning of the seventh century. Scattered across the plains behind Dibba are gravestones from a battle in 632 AD, when the forces of Islam finally established their control over the area.



From the seventh to the seventeenth century, the people of the emirates, drawing upon the maritime skill of their forefathers, ranged far and wide across the Indian Ocean, trading as far away as Mombasa in Kenya, Sri Lanka, Vietnam and even China, in great wooden dhows, similar to those that can still be seen under construction in boatyards around the country today.

Evidence of that trading tradition can be viewed on the surface at the site of Julfar, in Ras al-Khaimah, where fine Chinese and Vietnamese potsherds mingle with pottery from nearer at hand. According to one Portuguese author, Duarte Barbosa, writing in 1517, the people of Julfar were 'persons of worth, great navigators and wholesale dealers. Here is a very great fishery as well, of seed pearls as well as large pearls'.

One of those navigators was Ahmed bin Majid, the 'Lion of the Sea', and one of the greatest figures in the UAE's history, some of whose manuals of navigation still survive. While the Portuguese opened up the area to contact with Europe, they did so in a wave of battles and bloodshed, levelling cities like Julfar and Khor Fakkan, on the East Coast. By the early eighteenth century, Julfar was abandoned, and the great trading tradition of the region went into decline.



Abu Dhabi, 1950.



Abu Dhabi, 1950.

Dubai.



While European powers like Portugal, Holland and then Britain competed for regional supremacy, however, a new power grew almost unnoticed in the emirates, the state of the Qawasim (or Qassimis), whose descendants today still rule the Emirates of Sharjah and Ras al-Khaimah. Drawing on centuries of maritime experience, the Qawasim by the beginning of the nineteenth century had build up a fleet of over 60 large vessels, and could put nearly 20,000 sailors to sea.

Their strength posed a serious challenge to the British, then emerging as the dominant power in the Indian Ocean, and in the first two decades of the nineteenth century a series of clashes between the two sides ended in the virtual destruction of the Qassimi fleet and the consolidation of British influence in the Gulf.

The British claimed that the Qassimi vessels had engaged in piracy; and from that the area gained the name 'The Pirate Coast'. In a masterful debunking of this claim, however, the Ruler of Sharjah, HH Dr Sheikh Sultan bin Mohammed Al Qassimi, in his book, *The Myth of Arab Piracy in the Gulf*, has shown that behind the British offensive lay the desire to control the maritime trade routes between the Gulf and India.

The British established themselves in the Gulf at the beginning of 1820, signing a series of agreement with the sheikhs of the individual emirates that, later augmented with treaties on preserving a maritime truce, resulted in the area becoming known as 'The Trucial States'.

Peace at sea meant that the 5,000 year-old pearl fisheries of the lower Gulf could be exploited without interruption, and once again fine pearls from the emirates were exported, not only to India, but away to the growing market in Europe. The pearling industry thrived during the nineteenth and early twentieth centuries, providing both income and employment to the people of the Arabian Gulf coast. The First World War, however, dealt it a heavy blow, while the world economic depression of the late 1920s and early 1930s, coupled with the invention by the Japanese of the cultured pearl, virtually finished it off.

On land, freed from the damaging effects of warfare at sea, but lacking any real economic resources, the emirates developed only slowly during the nineteenth and early twentieth centuries. One of the greatest figures of the period was Sheikh Zayed bin Khalifa of Abu Dhabi, who ruled for over 50 years, from 1855 to 1909, earning the title 'Zayed the Great'. His son, Sheikh Sultan, father of the present ruler, Sheikh Zayed, was ruler between 1922 and 1926, and then, after a brief reign by a brother, one of Sheikh Sultan's sons, Sheikh Shakhbut, came to the throne at the beginning of 1928.

With an economy based upon fishing and pearl-diving along the coast, and on simple agriculture in scattered oases inland, like Liwa and Al Ain, when the world market for Gulf pearls collapsed, the already poor Emirate of Abu Dhabi suffered a catastrophic blow. Sheikh Zayed's family, like their people, fell upon hard times. When the young Zayed was growing up, there was not a single school anywhere in the Trucial States. Like his fellows, he received only a basic instruction in the principles of Islam from the local preacher, although a thirst for knowledge took him out into the desert with bedouin tribesmen, to absorb all he could about the way of life of the people. He recalls with pleasure what his expeditions taught him about desert life, especially falconry which has remained a life-long passion.





In his book, *Falconry: Our Arab Heritage*, published in 1977, Sheikh Zayed noted that a falconry expedition:

brings together a group of men, never more than sixty and never less than ten . . . each of them is animated by the prospect of an agreeable and refreshing change, away from the clamour of the city and the monotony of daily life.' The companionship of a hunting party, he adds, 'permits each and every member in the expedition to speak freely and express his ideas and viewpoints without inhibition or restraint, and allows the one responsible to

acquaint himself with the wishes of his people, to know their problems and perceive their views accurately, and thus to be in a position to help and improve their situation.

These early years taught Sheikh Zayed much about his country and his people. In the early 1930s when the first oil company teams arrived to carry out a preliminary surface geological survey, it was Sheikh Zayed who was given the task of guiding them around the desert, providing him with his first exposure to the industry that was later to have such a great effect upon his country. He performed well, and in 1946 he was the obvious choice to fill a vacancy as Ruler's Representative in the oasis of Al Ain, then a cluster of small villages, though today a thriving city with a population of around 200,000.

An early European visitor to Al Ain, shortly after Sheikh Zayed took up his post, was Edward Henderson, an oil company representative. In his memoirs, he remembered the impression the young Zayed made upon him. 'He was then around thirty years old,' Henderson recalled. 'He was handsome, with humorous and intelligent eyes, of presence and bearing, simply dressed and clearly a man of action and resolution . . . Although he was young, and had only been formally in charge of the Abu Dhabi sector of the oasis and its surrounding deserts for some two years, he was experienced in the politics of the region, and was already by far the most prominent personality in the area. He had a sure touch with the Bedouin.'

Another visitor, the explorer Sir Wilfred Thesiger, whose book *Arabian Sands* remains a classic of travel writing, wrote that he was like the head of a big family: 'He was always available to listen to the problems of people, and he tried the problems of those who came to him for judgement so that they would leave quietly, content with his judgements which were distinguished by their astute insights, wisdom and fairness.'

The job of Ruler's Representative not only involved the task of administering Al Ain itself, but also the whole region nearby, giving Zayed an opportunity to learn the techniques of government, and also, during the Buraimi dispute in the late 1940s and early 1950s, to gain experience of politics on a broader plane.

A key task was that of developing Al Ain itself, where he ensured that the subterranean water channels, or *falajes*, were cleaned out, and he built a new one, helping to stimulate agriculture in the area. In a foretaste of today's massive afforestation programme Sheikh Zayed also began the planting of ornamental trees that now, grown to maturity, have made Al Ain one of the greenest cities in Arabia.

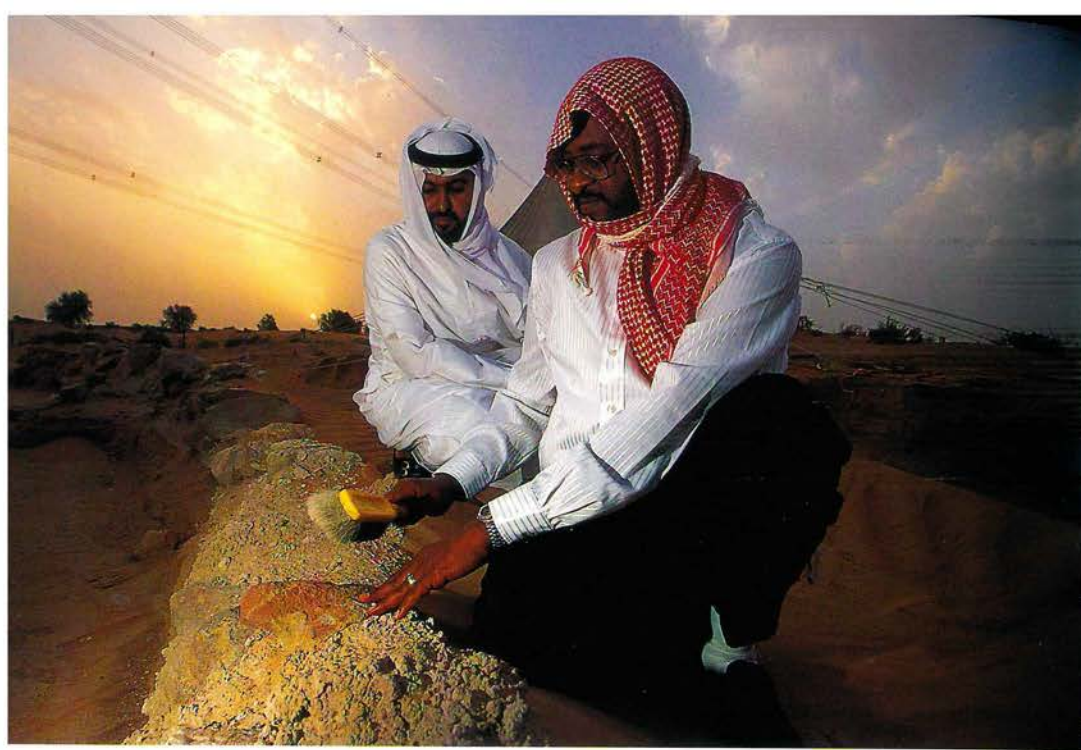
In 1953, with his brother, Sheikh Zayed paid his first visit to Britain and France, recalling years later how he had been impressed by the schools and the hospitals. In the future, he decided, his own people must have the benefit of similar facilities. He remembered later: 'There were a lot of dreams. I was dreaming about our land catching up with the modern world, but I was not able to do anything because I didn't have the wherewithal in my hands to achieve these dreams. I was sure, however, that one day they would become true.'

Yet, even lacking sufficient resources, during the 20 years he was in Al Ain, Sheikh Zayed succeeded in moving ahead with development of the area faster than anyone, except perhaps himself, would have expected. One British Political Agent, Sir Hugh Boustead, recorded his astonishment that 'everything he managed to accomplish in Al Ain and the surrounding areas were all for the benefit of the people.'

When, a little over 30 years ago, revenues from oil exports offered the opportunity to develop the emirate as a whole, Sheikh Zayed was the obvious choice of the Al Nahyan family, rulers of Abu Dhabi for 250 years, to tackle the challenges ahead. He was a man in a hurry. With revenues growing, he was determined to use them in the service of the people, and a massive construction programme got under way, of roads and schools, housing and hospitals.

Upon acceding to power in 1966, he called openly for the seven emirates comprising the Trucial States to come closer together. 'Federation is the way to power, the way to strength, the way to well-being, a high reputation . . . Lesser entities have no standing in the world today, and so it has ever been in history.' As always, Sheikh Zayed followed up his words with concrete action, donating substantial funds to the Trucial States Development Council, which had been established a decade or so before to promote development projects. By 1968, Abu Dhabi was the Fund's largest donor.

When in 1968 the British announced their intention of leaving the Gulf by the end of 1971, the Rulers of the Emirates of Abu Dhabi, Dubai, Sharjah, Ras al-Khaimah, Fujairah, Ajman and Umm al-Qaiwain, led by Sheikh Zayed and Sheikh Rashid bin Said Al Maktoum, then Ruler of Dubai, commenced negotiations with the aim of forming a federation. The formal establishment of the state of the United Arab Emirates on 2 December 1971, with Sheikh Zayed as President and the late Sheikh Rashid as Vice President, marked the successful outcome of those discussions. Twenty-seven years later the Emirates' unique level of political stability and economic prosperity stands as a testimony to the wisdom of that decision.



ARCHAEOLOGY UPDATE

Over the course of the last year, discoveries by archaeological teams throughout the UAE have added valuable information to the emerging picture of the country's heritage. The first excavation in the Emirates took place in 1959, on the island of Umm al-Nar, near Abu Dhabi, and as late as the mid-1980s, little work had been done in much of the country. Thanks to an active programme in recent times, it is now clear that the area has played a major role in the development of international trade routes for at least 6,000 years.

Early in 1998, further work by the Abu Dhabi Islands Archaeological Survey (ADIAS) at a site on the western island of Dalma uncovered the remains of the earliest settlement yet to be found in the country. The work at the site, which has been provisionally dated to around 5,000 BC–4,000 BC, uncovered the remains of the floors of at least two houses. Calculations from post-holes found in the floors suggest that the houses may have been substantial structures of up to 7 metres in diameter. Other finds included the bones of gazelles and domestic animals similar to sheep and goats, showing that the people were both hunting wild animals and raising livestock, while the presence of pottery sherds from the early 'Ubaid civilisation in Mesopotamia indicates that the Dalma people were also engaged in trade up and down the Gulf. At the time, Dalma was almost certainly an island, and the site provides, therefore, the earliest evidence of the involvement of the people in maritime trade.

Work was also undertaken during the year on another site dating from the fifth millennium BC. Situated at the foot of Jebel Buhays, in Sharjah, the site was excavated by a team from Germany's University of Gottingen, working in collaboration with the Sharjah Department of Antiquities and Heritage. So far unique, the Jebel Buhays site is a mass cemetery, where well over 100 skeletons have been uncovered. Although pottery was already known by the people of Dalma at this time, it had not reached Jebel Buhays. Evidence from the graves, however, shows that the people had already begun to wear jewellery. Pearls offer early evidence of the antiquity of the UAE's pearling industry, while among beads found in the graves were some made of stones, like carnelian, which do not occur naturally in the Emirates, further evidence of trade links in the distant past.

By the third millennium BC (3,000–2,000 BC), the UAE was already well integrated into emerging trade networks. Three major sites from the Umm al-Nar period (2,500–2,000 BC) were excavated during the year. Circular graves built of massive cut stone blocks, the three tombs were at Mileiha, in Sharjah, excavated by the local Sharjah archaeological team; at Shimal, in Ras al-Khaimah, excavated by a team directed by the National Museum of Ras al-Khaimah; and, most productive of all, at Tell Abraq, excavated in association with the Sharjah Department by a team from the University of Sydney, Australia. (See report on Tell Abraq excavations below).

Much can be learned from the analysis of the finds made in graves and settlements, and during the year results appeared of a study of bronze implements from third millennium BC sites which have raised new questions about the spread of metallurgy throughout the region. Carried out at Sydney University, the study showed that many of the metal implements had a high percentage of tin, several hundred years before tin-bronzes became common elsewhere in the Middle East. No natural sources of tin exist in the Emirates, and the study suggests that the metal may originally have come from the mountains of northern Afghanistan and southern Central Asia, perhaps reaching the Gulf through the Indus Valley civilisation of Harappa and Mohenjo-daro.

Other work during the year was at Muwailah, near Sharjah International Airport, where continuing excavations, again by a team from Sydney, took place at an Iron Age settlement. The site, dated to between 1100 BC and 600 BC, had already yielded the oldest iron implements yet found in the country. This year, finds included part of a large locally-made pottery jar on which was inscribed three letters in an early South Arabian alphabet. Probably to be read as B, M & L, perhaps the name of the maker, the letters are the earliest evidence of writing yet found in the UAE.

One rapidly growing aspect of local archaeology is the study of the Islamic period. In Ras al-Khaimah, a third season of excavations was undertaken at the 'tell' (mound) of Kush, in the village of Shimal. Originally founded in pre-Islamic times, Kush was a major centre by the seventh century AD. The excavations, carried out by the National Museum of Ras al-Khaimah, uncovered evidence of a fortified building, with walls up to 2.5 metres thick and still nearly 3 metres high. From the eighth to the thirteenth century, the settlement grew, with evidence of increased prosperity being shown through the

rising number of imported Chinese porcelain fragments. One major find was a gold coin from the Omani ruler Omar bin Yousuf Al Wajih, who began his reign in 961 AD. Only one other coin of the same type is known.

Kush was probably the main centre of the port of Julfar until around the end of the thirteenth century, when changes in the coastline caused by the silting up of lagoons led to a new settlement being built a few kilometres away.

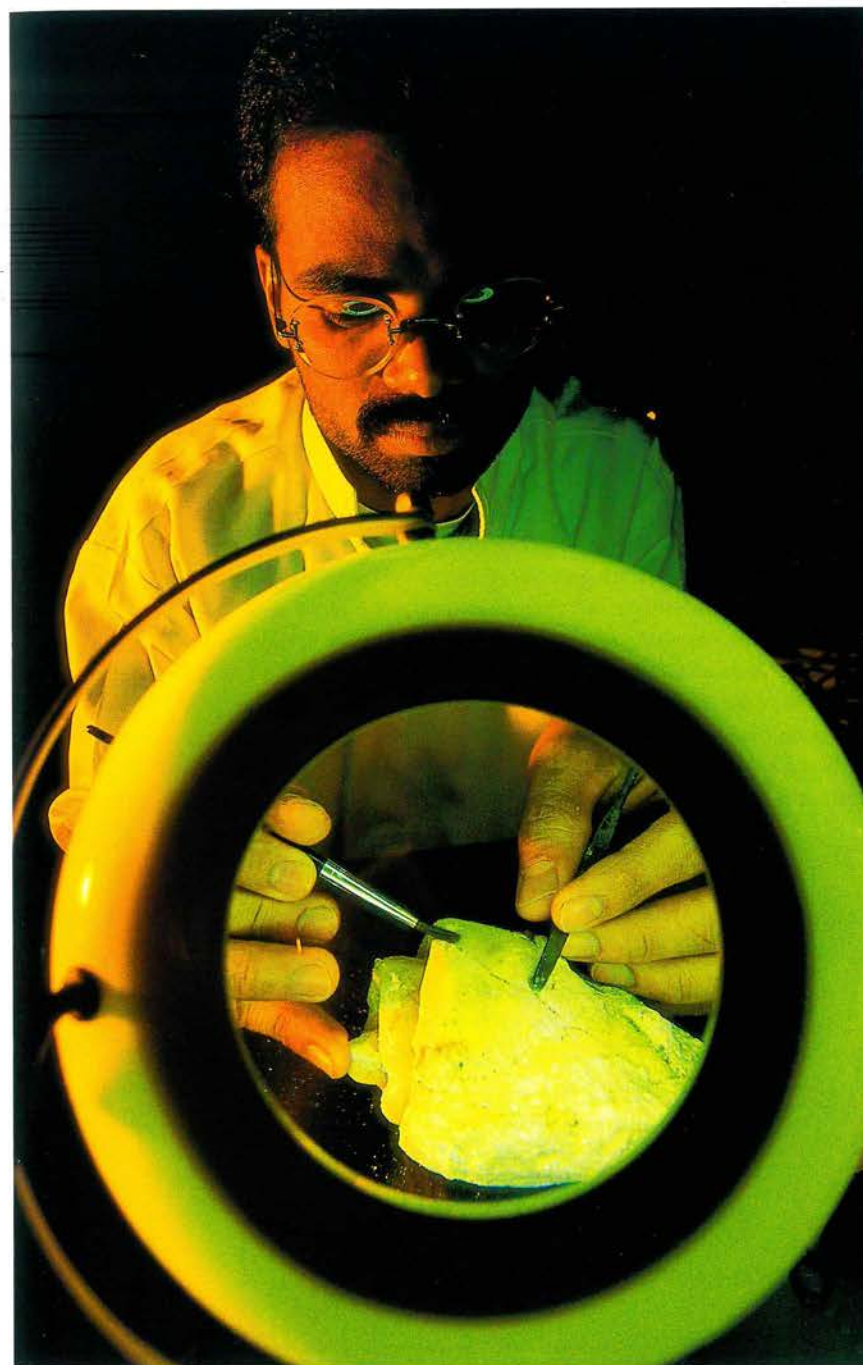
Two other projects focused on the Late Islamic period. On the island of Merawah, west of Abu Dhabi, an ADIAS team plotted a seasonal settlement site, probably dating to the sixteenth or seventeenth century onwards. A total of 160 hearths and a sophisticated water-catchment system were found. Results from Merawah, and from another island, Balghelam, are now beginning to provide an archaeological explanation of the way in which the people of the region were able to make a living on the country's coast and islands.

In and close to the Hajar Mountains, the presence of permanent water made settlement much easier than in the desert zones. One such settlement, at Hail, in Fujairah, was studied in detail during the year by a team from the University of Sydney, with particular attention being paid to surviving Late Islamic buildings, including a small fortified palace, a watchtower and a mosque, as well as to the patterns of the field systems, some still in use. Plans for conservation of the buildings are now being prepared by the Fujairah government.

Excavations at Tell Abraq

Between mid-December 1997, and mid-February 1998, nine weeks of excavation were conducted at the prehistoric mound of Tell Abraq on the border of Sharjah and Umm al-Qaiwain in the northern UAE. The largest prehistoric site in the southern Gulf, Tell Abraq provides a continuous record of human occupation extending from c. 2,200 to 400 BC, with slight evidence for re-use of the mound, primarily for burial, c. 300–400 AD. Five seasons of excavation (1989, 1990, 1992, 1993, 1997/8) have been conducted at Tell Abraq, two under the aegis of the University of Copenhagen, and three under the aegis of the University of Sydney. Since 1992 the excavations at Tell Abraq have been supported by the Australian Research Council, General Motors (Dubai) and the Rulers' Offices of Sharjah and Umm al-Qaiwain.

The most recent season had two very particular goals: first, to resolve certain stratigraphic problems in the building sequence on the main mound; and second, to complete the excavation of a late third millennium collective burial, a project begun during the 1993 season. Today, Tell Abraq rises over 8 metres above the ancient ground surface on which the earliest stratified material lies. It consists of a massive, circular fortification built of mudbrick faced with stone, which was erected c. 2,200 BC and around which settlement was clustered. This settlement took the form of palm-frond dwellings or 'arish, which have left little trace apart from post-holes, although masses of pottery, shell, bone and other finds bear witness to the intensity of occupation in an area of some 4 hectares. The circular fortification originally measured c. 25 metres in diameter and stood to a height of over 8 metres. From its position on the coast it must have offered a commanding view over the adjacent lagoon.





Early in the second millennium a massive brick platform was erected over the fortification tower, the precise function of which is uncertain. Similar mudbrick platforms are, however, well attested at sites in Central Asia, Afghanistan and eastern Iran. The site continued to be occupied throughout the Iron Age, and was not abandoned until sometime in the fourth century BC, although it was later used, in the first few centuries AD as a burial place. Graves contemporary with those known further north at ed-Dur have been found dug into the much earlier layers of the mound.

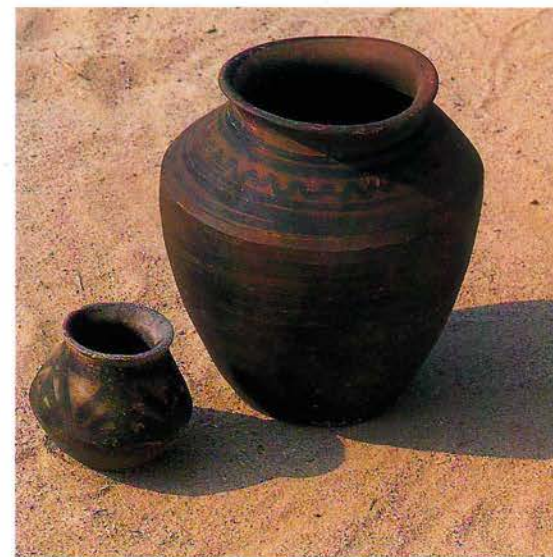
A great deal of effort was put into the excavation of the tomb this season. Like its counterparts elsewhere in the Oman peninsula, the tomb at Tell Abraq is circular. It measures c. 6 metres in diameter and is built of unworked slabs of beach-rock (*farush*) set on a pavement of the same. The chamber is divided by a single internal wall and the entire tomb is faced with finely worked ashlar blocks of limestone. The Tell Abraq tomb was built on the original ground surface of the site, the same one on which the fortification was erected, and stands just 10 metres west of the fortress. In 1993, the western half of the tomb was excavated, revealing the largely disarticulated remains of a minimum number of 155 individuals. As the quantity of bone recovered in the eastern half excavated this year was even greater, a rough estimate would put the number of interments in the tomb at between 300 and 400.

Tombs of this sort were collective and communal. In other words, they were used by the community as a collective burial place and do not represent the interred remains of a single, catastrophic event. A trapezoidal 'keystone' in the outer wall seems to represent the main point of entry and exit. It was carefully masoned and, while tightly fitting, could easily have been removed when new interments were ready for burial. Stepping into a chamber containing prior interments on which the flesh had long since disappeared, those inserting a new corpse must have invariably, if unintentionally, disturbed earlier burials. For this reason, most of the bone recovered is disarticulated, i.e. no longer in anatomical position, yet nothing suggests any wilful or wanton vandalism of earlier interments. Grave goods were widespread throughout the tomb and are likely to represent at least two types of finds: personal equipment (weaponry, jewellery) placed in a tomb because it was meaningful to the deceased; and vessels (both stone and ceramic) which may have contained food offerings for the journey to the afterlife or for deities, or unguents and perfumes for use by the deceased or, again, as gifts for deities.

The Tell Abraq tomb is unusual, however, in two respects. By the early second millennium, perhaps as early as 1800 or 1700 BC, it had been covered over by settlement debris (following its last period of use) and thenceforth remained invisible to the inhabitants of the site. This circumstance had the effect of protecting the tomb from graverobbing in antiquity, particularly during the first millennium BC when earlier graves were often robbed of metal. The protection thereby afforded to the tomb meant that this year, in the eastern half alone, we were able to recover c. 65 complete ceramic vessels, a dozen soft-stone vessels, half a dozen alabaster bowls, 22 bronze spearheads, ten bronze daggers, 11 ivory combs, over 600 stone beads

(agate, carnelian, soft-stone, lapis) and selected luxury items such as animal pendants (two gold and one made of a silver/lead alloy) and an ivory duck mounted on a long, rectangular ivory rod. The pottery includes vessels manufactured in Mesopotamia, Iran, southeastern Iran and Bactria (modern northern Afghanistan/southern Uzbekistan).

Much analysis remains to be done on the archaeological finds and human remains from Tell Abraq. The results are certain to secure it a lasting place in the discipline of Arabian archaeology.



Fujairah rock art

A major study of rock carvings in Fujairah's Wadi Hayl and other areas in the Hajar Mountain range in the UAE has concluded that some of the carvings, known to archaeologists as petroglyphs, may be over 3,000 years old, according to a report in the bi-annual academic journal *Arabian Archaeology and Epigraphy*.

The paper, written by Michele Ziolkowski, of Australia's University of Sydney, examines a group of over 60 petroglyphs near the old village in Wadi Hayl and compares these with groups of petroglyphs from other parts of the Emirates, like Wadi Saham, Bidiya and Wadi Ashwani. Petroglyphs, also known as rock art, have been recorded widely in the UAE, but have not previously been subjected to any detailed analytic and comparative study.

As part of work by the Australian Archaeological Mission in the Emirates, however, Ziolkowski spent several weeks in the Wadi Hayl in the winter of 1996/1997, drawing, photographing and recording all of the petroglyphs in the area. Many resembled animals, while others appeared to be adapted human shapes. Others still were finely drawn geometric designs, 'pecked' (hammered) onto the surface of the rock, or on o large boulders. In all, Ziolkowski and colleagues from the University of Sydney found 65 examples in Wadi Hayl, mainly in an area where there was also other evidence of previous human occupation, like derelict terraced field systems and remains of houses and other structures.

A total of 16 sites with petroglyphs have now been recorded in the UAE, all but four of which are in the Hajar Mountains or along the East Coast, but many of these have only one single petroglyph. The Wadi Hayl site is by far the most important yet recorded, the second most important being the nearby Wadi Saham, just to the west of Wadi Hayl, which has 27 examples.

One of the major problems facing those who study petroglyphs is that of how they can be dated. In the absence of any inscriptions on the rocks, Ziolkowski was obliged during her study to try to draw conclusions from comparisons with other petroglyphs throughout the UAE and southern Arabia, stretching up northwards to the rest of the Middle East. Other comparisons can be drawn from similar drawings or carvings on artefacts excavated at archaeological sites which can be safely dated by methods ranging from radiocarbon dating to the associated presence of pottery and other artefacts.

The Wadi Hayl petroglyphs are of particular interest, not merely because of the large number that have been found, but also because there is other evidence of human occupation in the valley covering a long period. While the valley is locally best known for its impressive small fortified palace and adjacent watch-tower, only abandoned in the last few decades, archaeologists, including Ziolkowski, have also found evidence stretching much further back. On the basis of radiocarbon dating, for example, a nearby small hill-top fort has been dated to the fifteenth – early eighteenth century AD, while items made of a locally-available softstone have been found which can clearly be compared to items discovered in graves dated to the local Iron Age (1,300 BC to 300 BC). Potsherds have also been found going back to the second millennium BC.



On the basis of her comparative studies, Ziolkowski believes that some of the Wadi Hayl petroglyphs 'may be as early as 1400–1100 BC,' with others coming from later on in the Iron Age. 'It is (also) quite possible that other examples are of the late pre-Islamic (250 BC–630 AD) and/or early Islamic period (seventh century AD),' she adds, also noting that 'the distinct possibility that certain rock art motifs at Wadi Hayl may be of a relatively recent date should not be discounted.' In effect, the Wadi Hayl petroglyphs may represent a gallery of local art that stretches back over a period of more than 3,000 years, an important, if neglected, part of the UAE's artistic heritage.

As part of studies into the Wadi Hayl, another archaeologist from Sydney is also undertaking a detailed study of the Late Islamic settlement, including the fortified palace and watch-tower, which are scheduled for conservation in the future as part of Fujairah's efforts to preserve its historic monuments.



PEOPLE AND TRADITIONS

The people of the UAE, like those of the rest of the peninsula, are of Arab stock. Their forefathers formed part of successive waves of migration 2,000 to 3,000 years ago that spread eastwards across Arabia, bringing with them their culture, their language and their skills at surviving in what was becoming an increasingly harsh climate.

As they arrived, they mingled and then merged with the people already living in the region now known as the UAE, people who, like them, were of Semitic stock. Inscriptions in now-extinct Semitic languages found on archaeological sites at Mileiha, in Sharjah, and at Ad Door, in Umm al-Qaiwain, testify to the presence of these early inhabitants, but in the centuries that have followed, the population coalesced into a homogeneous whole, united by a common heritage, and, since the coming of Islam in the seventh century AD, by a common faith.

Popular accounts from such explorers as the British writer, Sir Wilfred Thesiger, who crossed the Empty Quarter by camel to arrive in the emirates nearly 50 years ago, have created an impression in the outside world that the people of the region were traditionally nomadic herdsmen, the bedouin, moving with their camels and goats across the desert from one pasture to another. There is, of course, some truth in that impression, but it is far from the whole picture.

Of the many different tribes that make up the country's population, very few were ever wholly nomadic. The bulk of them were settled, at least for much of the year, engaged in simple agriculture, or in harvesting the pearl banks and fishery stocks of the Arabian Gulf and the Gulf of Oman coast in the east of the country.

The real desert, with its great sand dunes, is confined to the south and south-west of the country, bordering the Empty Quarter or the Rub al-Khali. Across these sand dunes and across the gravel plains that fringe them the nomadic tribesmen migrated, like the Awamir, one of the four tribes that together comprise the bulk of the indigenous population of the Emirate of Abu Dhabi. For them, a journey across the desert from waterhole to waterhole was a normal part of a harsh life.

Yet even in the desert, as at Liwa, in the south of Abu Dhabi, there are little oases that have been used for hundreds of years by tribes such as the Manasir and the Bani Yas (the confederation headed today by Sheikh Zayed) to cultivate a few palm trees and to grow some vegetables.

Although these people did venture out into the desert, they could be found, too, along the coast, where groups like the Qubeisat, the Rumaithat and the Sudan, all part of the Bani Yas, could be found engaged in pearl diving or in the fisheries. Indeed, many of the men spent part of the year in the oases, and the remainder at sea, following a lifestyle far different from the romantic image of the nomadic bedouin.



The women of the family stayed at home, looking after the date-palm gardens and the children, obliged to develop a tough and resilient independence far removed from the false image held in much of the world about the women of Arabia.

In areas along the edge of the Hajar Mountains, where subterranean water supplies were much more plentiful, such as at Al Ain, the inland oasis-city 160 kilometres from Abu Dhabi, tribes like the Dhawahir spent the whole year tending their palm groves and farms irrigated by tapping the underground water through *falaj*es tunnelled through the earth. The earliest *falaj* so far discovered dates back to around 1,000 BC, evidence that agriculture has long been a part of the local way of life.

In the northern emirates where the gravel plains are more fertile than the sand dunes, and where there is generally more rainfall, it was also possible to cultivate crops throughout the year, while in the Hajar Mountains, tribes like the Sharqiyyin, whose centre is the East Coast town of Fujairah, and the Shihuh from Musandam, delved deep for the water flowing under the gravel beds of the wadis (valleys) to irrigate small terraces carved out of the mountainsides.

Along the whole of the coast in the northern emirates, small towns sprang up around sheltered creeks that provided havens from the often tempestuous waters of the Arabian Gulf and the Gulf of Oman. Here the people derived their living not only from fishing, but from overseas trade as well. The wooden dhows that still can be seen carrying goods to and fro across the Gulf, apart from their diesel engines, are almost identical to the vessels that have been used for centuries, while the more successful ports, like Dubai, Sharjah or Julfar (later Ras al-Khaimah), the focal point of the Qawasim, looked for their livelihood outwards to the sea, rather than inland, to the desert.

Thus, although the people of the emirates were related by kinship to the bedouin tribes of the heart of the peninsula, their lifestyle in most cases was much more varied, including agriculture, fishing and trade, as well as simple nomadic herding. That variety, naturally, is reflected in the traditions of the people.

One of the features of the development of the UAE over the past 27 years has been the attention paid by the government to the stimulation and preservation of local traditions, in line with Sheikh Zayed's belief that 'a people that knows not its past can have neither a present nor a future'.

Nowadays, except for remote regions, traditional ways of life are largely accessible through heritage centres and museums and other government sponsored activities.

Reflecting the traditions of the desert, the role of the camel has been given much attention. Once it carried the people across the sands, providing at the same time milk, meat and leather, while its shoulder-blades were used as little 'blackboards' for children studying. Now proper school equipment is available from other sources, as is leather, but many local families still own a few camels for meat and for milk. To encourage them to do so, the government offers subsidies to those who still keep this noble and historic beast of burden. During the great camel races held throughout the country in the winter months, owners from the Emirates and the rest of Arabia pit their fastest steeds one against the other.



Traditional dhow sailing race.

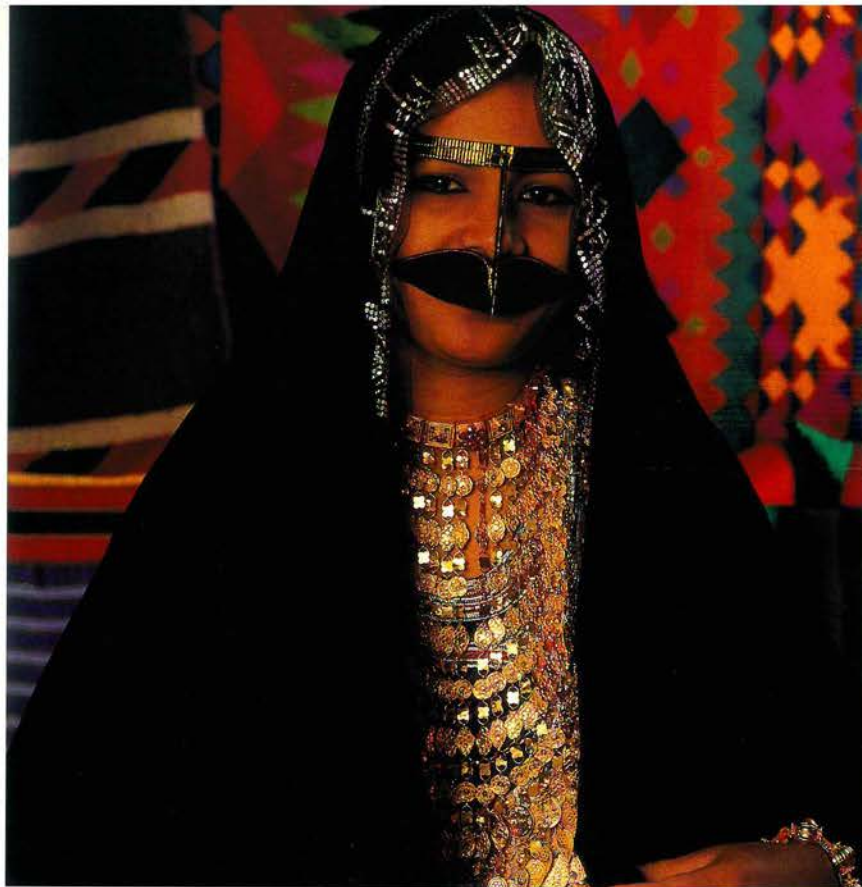


Camels were always a beast of burden in the desert areas, and are rarely seen, therefore, on the East Coast, a narrow agricultural strip hemmed in by the Hajar Mountains. Here, another traditional sport survives, that of bullfighting. No Spanish-style corrida, however, but a contest that pits bull against bull, with the massive animals locking their horns and wrestling until one turns tail and flees. These bulls are descendants of animals from the Indian subcontinent that were brought in to turn the waterwheels lifting water from shallow wells. Today, their traditional function has been taken over by the pipe or the diesel pump, but the East Coast's bulls survive and thrive as the popularity of bullfighting among both expatriates and UAE citizens grows.

In many of the UAE cities and towns, in particular in the Bateen area of Abu Dhabi and along the creek at Ajman, boat-builders can still be seen hard at work constructing dhows with few tools and no blueprints, practising the skills that have been handed down for centuries.

Efforts have also been made to revive the pearl fishery, which suffered immeasurably following the growth of the cultured pearl industry in Japan, although the days of large numbers of pearling dhows heading off at the start of the pearling season are long past. Recently, divers found a large, crystal-clear pearl with a diameter of around 1.5 centimetres. The 'Dana' pearl, worth more than \$50,000, was found near Dalma during a ten-day expedition which also yielded hundreds of small pearls.

Another tradition that has taken on new life is that of boat-racing. Two kinds of boats are used. The first is powered by a single sail that catches the wind to drive wooden boats of shallow draught. A couple of dozen such sailing boats scudding across the waves, their sails shining in the sun, is one of the most romantic sights to be seen anywhere in this often-romantic country. The other boats are powered by man, not the wind, great rowing boats of 20 metres or more in length, rowed by up to a hundred oarsmen straining every muscle to reach the finishing line. Boat races are held on special occasions throughout the year, to commemorate events such as the annual National Day holiday, serving to keep alive the maritime traditions of the UAE's sturdy people.



More of an individual sport is that of falconry, whose origins among the Arabs date back many centuries. Flying saker or peregrine falcons prized for their strength or speed, the people of the region practised falconry in the past not merely as a sport, but as a way of providing a useful supplement to their diet of tasty hare or well-fed bustard. Today, it is purely a sport, and one which is popular from the highest to the lowest in the land. Like other hunters, however, the people of the Emirates are concerned with the need to understand and protect the environment, and the quarry which they hunt, lest it disappear. With government support, there are now a number of programmes designed to study ways of breeding in captivity the most popular quarry, the houbara bustard, and a full programme of research into the country's birdlife is now well under way.

The people of the UAE have seen dramatic change, change that has provided them with all the benefits of a modern, developed society. At the same time, however, both government and people are determined that their heritage shall be preserved. In the past, life in the UAE was hard, and it took extraordinary skill to be able to survive in the harsh terrain and arid climate. Today, things are easier, but by holding on to their heritage the people are able to draw upon their confidence in their past to tackle and to overcome the challenges of the present and future.



HERITAGE AND CULTURE

With unprecedented economic, social and cultural growth in less than three decades, there has, naturally been a danger that the Emirates' cultural heritage would be lost in the transformation from traditional Arab society to modern cosmopolitan state. However, mindful of the inestimable value of its heritage, both as a legacy for its own inhabitants and as way of introducing visitors to the country's rich traditions, the UAE has made substantial capital investment in the establishment of museums and heritage centres, development of modern facilities for storage and classification of documents relating to the UAE, as well as the renovation and conservation of historic monuments and sites.

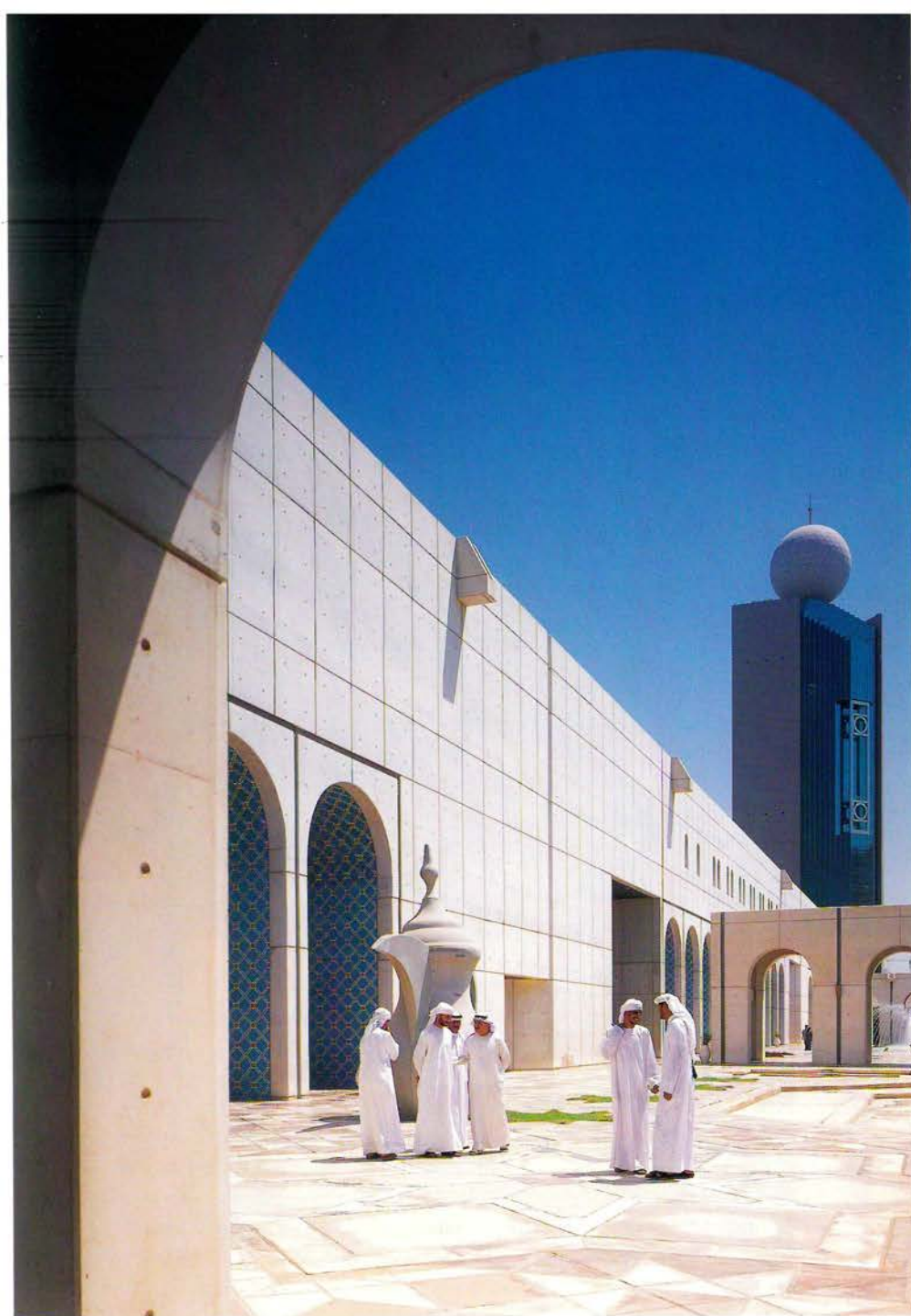
The UAE's cultural outlook is not, however, insular. Contemporary music, theatre, dance, poetry and literature, as well as painting and sculpture are actively encouraged alongside the more traditional art forms. Visiting performers and travelling exhibitions are greatly welcomed, forming a powerful ingredient in the UAE's cultural menu which reaches far beyond its own boundaries, embracing creative works from a wide range of traditions.

At federal government level responsibility for promoting cultural activities, functions and institutions rests with the Department of Culture at the Ministry of Information and Culture. Each individual emirate also has its own cultural department, which supports cultural institutions, artistic bodies, museums and heritage centres, some of which are described below.

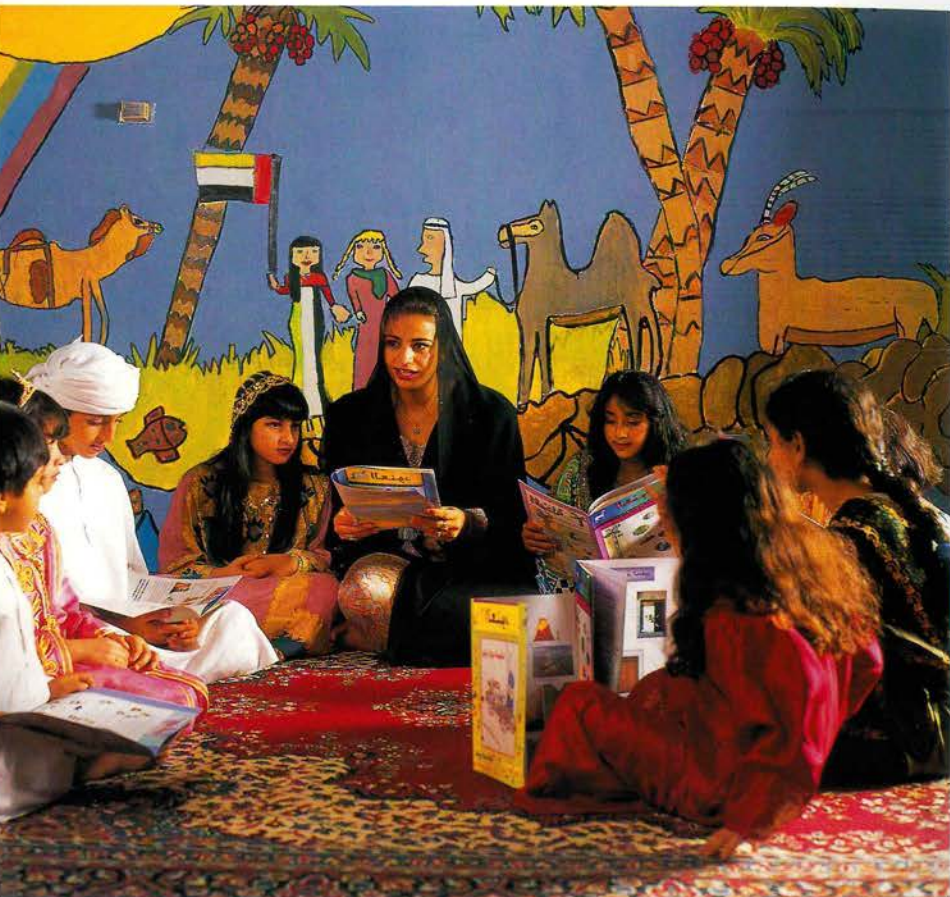
Cultural Foundation

The Cultural Foundation in Abu Dhabi plays a most valuable and deeply appreciated role in the cultural life of the Emirates. Situated in the same compound that contains Abu Dhabi's old fort, the impressive building contains a large exhibition area, several lecture rooms, smaller exhibition centres, a large and well-organised library, together with administrative offices for staff who are concerned with arranging various exhibitions, events and promotional activities for music and the arts. From its quiet beginning in the early 1980s, it has now become a major source for promoting and encouraging art in all its forms, as well as providing a comprehensive artistic education for aspiring artists.

Featuring prominently amongst the numerous cultural activities organised by the Foundation this year was the launch of audio cassette recordings in Arabic of classic and contemporary works, a pioneering initiative in the Arab world. Books being recorded include works by Anton Chekhov, Rabindranath Tagore, Taufiq Al Hakim, Najib Mahfouz and Agatha Christie. Prized among the Foundation's collection of contemporary works is Syrian poet Nazal Kabani's recording of his own writings, which was made when he visited the UAE a few years ago. The foundation plans to record about 100 titles per year.



U.A.E. Cultural Foundation in Abu Dhabi.



Centre for Documentation and Research

The Centre for Documentation and Research, newly housed in the government's archive centre, contains one of the largest, if not the largest, collection of manuscripts dealing with the UAE and the whole of the Gulf region. A dedicated staff at the Centre is engaged in cataloguing and filing references on everything from politics to wildlife.

The Documentaion Centre's old home, Al Hosn Palace, commonly known as the Old Fort or the White Fort, was formerly the ruler's residence, as well as the seat of local government in Abu Dhabi. The first fort to be built on the site was constructed over the freshwater well that was central to the settlement of the island of Abu Dhabi. The present magnificent fort, lovingly renovated and restored to the highest standards, was built in the late nineteenth century. The fort, which features prominently in old black and white photographs but is now overshadowed by the city's skyscrapers, is the oldest building in Abu Dhabi.



Other organisations and societies

Numerous other organisations and societies in Abu Dhabi promote art, music, poetry, literature and drama, supported by the government. One of these, the Emirates Writer's Federation is being housed in a new permanent headquarters. The National Theatre is also being made available to the Federation to enable its members to organise various administrative and cultural activities utilising the theatre's impressive facilities.

Emirates Centre for Strategic Studies and Research

Established in March 1994, the Emirates Centre for Strategic Studies and Research (ECSSR) has played a prominent role in enriching the cultural, social and political life of the country and in opening a new window to the world. The Centre has organised a series of conferences, lectures, seminars and specialised workshops on a number of key issues. These activities are undertaken as part of an overall programme, which aims to make a significant contribution to the study of important contemporary issues, with the purpose of facilitating research work and objective studies related to the UAE, in particular, and the Gulf region in general. A number of prominent scholars, researchers and specialists from different academic centres, institutions and think-tanks, as well as politicians, participated in these various activities.

Aware of the vital importance of professional interaction, ECSSR has established a major annual conference on a current Gulf topic, as well as an annual energy conference which deals with the role of Gulf energy in the world economy. The annual conference has featured issues such as 'Iran and the Gulf: A Search for Stability'; 'Gulf Security in the Twenty-first Century'; 'The Impact of the Information and Communications Revolution on Society and State in the Arab World'. The fourth annual conference, entitled 'Challenges of the Next Millennium: Education and Development of Human Resources' was held in May 1998.

In pursuit of its main objective to promote professional research and scientific inquiry, the ECSSR has also become the principal source in the region for certain kinds of specialised scholarly books: Arabic translation of seminal works written by the world's foremost experts addressing contemporary issues that are important to the Arab reader; and edited collections of original papers published at conferences and symposia sponsored by the ECSSR throughout the year. The latter are published in both Arabic and English. The latest such publication is entitled *Strategic Positioning in the Oil Industry: Trends and Options*, edited by Paul Stevens.

Heritage Village

A 20-minute drive from the centre of Abu Dhabi city are the tents and mud-brick dwellings of the Heritage Village, offering a fascinating introduction to the Emirates' traditional lifestyle. Opposite the Abu Dhabi International Exhibition Centre, the village provides a host of authentic attractions, including an evening sitting around a campfire drinking *gahwab* (Arabic coffee) while a camp guide describes bedouin crafts and customs, and a walk through a replica of the old marketplace, past the village mosque as it would have been 50 years ago, the winter settlements of a noble family and the date gardens that surround the village well.



Another authentic heritage village under the management of the Emirates Heritage Club is being built by Abu Dhabi's Public Works Department, whose craftsmen are striving to ensure that every detail is authentic. Part of the village holds a museum and a library. Reconstructions of the palm-frond dwellings of Al Ain prior to the oil boom are set on red sand brought from near the oasis town. A small area at the end of the village will accommodate farm animals such as cows, camels and goats. The village, which has perfect views of the city, is more than 150 metres long and 70 metres wide, and includes ethnic dwellings, a market area where people can purchase locally-made traditional handicrafts, and a special shop making Arabic sweets.

Al Ain Museum

The eastern fort of Al Ain, built in 1910 at the edge of the camel market, was converted into Al Ain Museum in the late 1970s. It houses collections of archaeological finds made in the Al Ain area, together with a variety of official gifts presented to Sheikh Zayed. There are several life-size exhibits of bedu life, displaying clothes, utensils and recreational objects.

Al Ain Zoo

The largest zoo (in surface area) of the Middle East, Al Ain Zoo is situated between the city and the low hills at the foot of Jebel Hafit. The central part of the zoo has caged animals from all over the world, an aquarium and a reptile house, as well as a restaurant, while the southern section is occupied by a very large enclosure for ungulates. The cat house (for big cats) and the large lion enclosure are also in this section of the zoo.

As part of a major development plan put forward for the zoo, a large jungle-like zone to house a wide variety of the African and Asian continents' wildlife has been proposed. Planted with tropical vegetation, the jungle zone would encompass an extensive area adjacent to the zoo. Animals such as lions, tigers, pumas, leopards and jaguars, Nile crocodile, oryx, and gazelle would be able to roam freely through the 'natural' habitat.

Proposals have also been put forward to expand the zoo to include a considerable collection of common and rare animal species from Asia, Europe and the Americas. Captive breeding and conservation protectorates are also envisaged and a natural history museum has been proposed. However, the development plans are still under discussion and have not been finalised as yet.



Dubai Museum

The old Fahidi fort in the centre of Bur Dubai has housed Dubai Museum's collection of archaeological and historical artefacts since 1971. It was renovated in 1994, with the addition of a large underground extension. On passing through the massive wooden doors, one enters a courtyard which contains several old wooden boats and a simple barasti dwelling house. Attractions of the new museum include reconstructions of domestic, industrial and educational scenes of life in Dubai before oil. The displays are astoundingly realistic, brought to life by near perfect models and preserved animals, cleverly positioned film footage of artisan activity, as well as the sounds and even the smells of the old souks. One can also see reconstructions of a small oasis, complete with flowing *falaj* (irrigation channel), a desert scene where bedouin sit around a campfire talking with the sights and sounds of wild animals in the periphery, dhow building and pearl diving.

Heritage and Diving Village

The ancient techniques and traditional culture associated with boating pearl diving, fishing and marine transportation are being preserved for future generations through the activities at Dubai's Heritage and Diving Village in the Al Shindagha area. Housed in purpose built

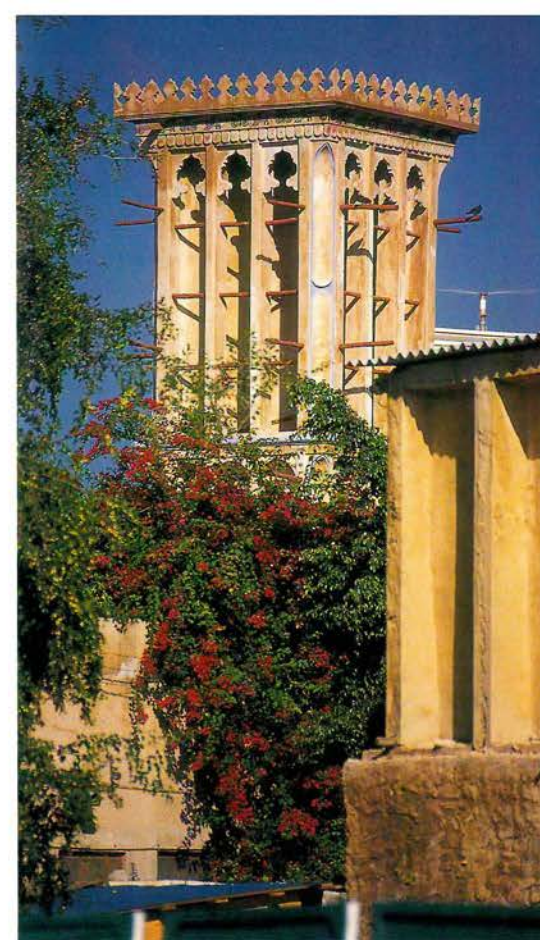
windtower and 'arish buildings that are perfect replicas of traditional houses, pearl divers gather together to join their *nakhuda* (captain) and *al-nabam* (singer), waiting anxiously for the captain's orders to launch their months-long trip across the sea, praying for good luck and a good catch. A tented bedouin encampment has also been reconstructed where traditional bedouin crafts are demonstrated.

Restored houses

Built in 1955 and used by the late Sheikh Rashid Bin Saeed Al Maktoum as a summer resort, Majlis Al Ghorafa is a simple two-storey building made from coral stone. The ground floor is an open verandah (*leewan* or *rewaaq*). The second floor of the Majlis is furnished with carpets and cushions in the traditional style and decorated with lanterns and rifles. A firebox and a selection of Arabic coffee pots complete the atmosphere. The doors and windows are hand-carved from solid teak.

Home of a former ruler of Dubai, Sheikh Saeed Al Maktoum House, a modest coral and limestone dwelling, was built in the late nineteenth century and marks the site from which Dubai grew. The house has been carefully restored and turned into a museum that showcases the development of Dubai. The house was the seat of government and, for many years, a communal residence for several generations of the Al Maktoum family. Sheikh Saeed lived here until his death in 1958. The house is a fine example of Arab and Islamic art and one of the finest examples of traditional architecture. The many wings of the house have been given over to individual displays depicting different aspects of Dubai's history. There are collections of old photographs, early stamps and currency as well as displays of ancient pearl diving tools and purpose built models of traditional wooden dhows.

The older part of Dubai town known as Bastakiya has been carefully restored. This creek-side area of town was the heart of old Dubai. The distinctive windtowers are designed to catch even the slightest breeze and funnel the cooler air down to the courtyard houses – visitors who stand beneath the windtowers can experience this early form of air-conditioning first hand. Narrow alleyways link the houses and lead visitors from one home to another. Some of the houses now contain art galleries.



Juma Al Majid Cultural & Heritage Centre

A non-profit making library and research centre established in 1991 dedicated to Arab and Islamic heritage, the Centre contains over 35,000 Arabic titles as well as 17,000 titles in English, French, German, Russian and other languages. A national heritage section contains books and materials in a variety of languages that relate specifically to the Arabian Gulf.

Dubai International Art Centre

Dubai Art Society was established in 1976 but only became widely known when it re-invented itself in 1980 by moving to newer premises and, later, in the mid-1980s, renaming itself as the Dubai International Art Centre. Today, it is prominent in the burgeoning local art scene.

Culture and Science Forum

The Dubai-based Culture and Science Forum, established in 1978 in order to promote cultural activities in the emirate, is involved in organising cultural symposiums and exhibitions, as well as publishing material on the UAE's cultural heritage, literature, science and contemplative studies. The Forum also administers the Sheikh Rashid Award for Scientific Excellence, for which science Masters and Ph.D graduates are eligible.

Dubai Zoo

Located in the middle of Jumeirah suburb, Dubai Zoo is due to be moved to a much larger facility near Mushrif Park. The zoo holds a collection of animals from all over the world. In spite of its small size, the zoo attracts many thousands of visitors, especially at weekends.

Sharjah

Sharjah was selected as the 1998 Arab Cultural Capital by the United Nations Educational, Scientific and Cultural Organisation (UNESCO) for its cultural infrastructure, evident from its network of museums, libraries, children's culture centres as well as arts, literature and heritage areas. Major activities sponsored by Sharjah, such as the Book Fair and highly-successful Art Biennial, which attracts artists from around the world, were also highlighted. (Cairo was chosen as the Arab Cultural Capital in 1996, followed by Tunisia in 1997, Sharjah in 1998, Beirut in 1999 and Bethlehem for the year 2000.)

In the centre of Sharjah a large area of old buildings has been re-constructed as an example of what the city used to look like in days gone by, providing wonderful insights into the lifestyles of previous generations. Narrow streets wind between white-washed walls, with copper studded wooden doors giving access to shaded courtyards. The atmosphere of the old souk has been re-created in the newly built Souk al-Arsah. On an island in the middle of Bank Avenue sits the old Sharjah Fort (*Al-Hisn*), rebuilt according to its original plans. Very close by is the Arts area, which comprises the Sharjah Art Museum, The Sharjah Art Centre, the Sharjah Art Galleries, and the Arts Cafe. Apart from the museum which was purpose-built recently, these facilities are housed in renovated old buildings surrounding a large square.

Sharjah Fort

The magnificent Sharjah Fort in the centre of the old town was originally built in 1820. It was almost completely demolished in 1969, with only a tower and a few walls remaining. The present Ruler, HH Dr Sheikh Sultan bin Mohammed Al Qassimi, had it restored to its former glory in 1996. The result, achieved by using both old photographs and documents supported by the knowledge of elderly Sharjah residents, is remarkable. The fort has three towers joined by rooms and halls around a large courtyard. Each room has a theme: trade, pearling, education, weapons, VIP photographs and many, many more.

Islamic Museum

Formerly the home of Saeed bin Mohammed Al Shamsi (*Al-Taweel*), the building which houses the Islamic Museum was renovated in 1996. Amongst the priceless artefacts, part of the private collection of the Ruler of Sharjah, are rare Islamic manuscripts in perfect condition dating as far back as the thirteenth century, lying side by side with beautiful works of art, jewellery, coins and small weapons. Here you can find a replica of the curtain which covers the famous *Ka'aba* stone in Mecca, the first map of the world, drawn by Sharif Al Idris, around 790 AD, as well as a big screen video presentation of the holy places of Islam.

Heritage Museum

Until 1972 Beit Al Naboodah was occupied by the Naboodah family. Today it houses a Heritage Museum depicting home life as it was some 150 years ago. The high exterior windowless walls and the L-shaped entrance corridor guarded by a heavy teak door are indications that security and privacy were both needed and desired in the previous century. All rooms face a central courtyard accessed by shaded corridors. The rooms house various exhibits: children's games and furniture, kitchen utensils, fishing and pearling gear, as well as complete bedrooms and majlis. The top floors of the house are provided with air circulation through recessed alcoves that hide air vents running the length of the wall to the roof.

The Majlis

The former home of Ibrahim Mohammed Al Midfa, secretary to four Sharjah rulers, the majlis has many beautiful features of traditional architecture, including an unusual round wind tower, columns and arches, and an original beam-and-barasti ceiling. It houses a private collection of Arabian antiques donated by the owner.

Sharjah Art Museum

Opened in April 1997, the Sharjah Art Museum is the largest of its kind in the Gulf. The architecture of the three-storey structure blends perfectly with that of the restored old buildings that surround it. The museum covers an area of 111,000 square metres and has some 32 exhibition halls, as well as a conference room, a well-stocked library, a shop and a cafe. Eight permanent exhibitions, donated by the Ruler of Sharjah, cover art and history relating to the Middle East. Orientalists, such as David Roberts are especially well

represented. There is work by modern artists as well as a historical set of lithographs depicting the battles between the Qawasim and the British Army in Ras al-Khaimah. Rotating exhibits by local artists as well as visiting exhibits from abroad occupy much of the first floor. The museum also holds regular seminars and lectures on art-related subjects.

Sharjah Art Centre

A teaching facility to promote art in the Emirates, Sharjah Art Centre is housed in a beautifully-restored three-storey building with a fascinating history. Originally the home of the British Residency Agent for the Trucial Coast, the house was extended to include a number of shops that became known as the souk Mohammed bin Saqr. During the 1960s it housed Sharjah's first hospital, which specialised in gynaecology and was thus the birthplace of many UAE citizens who today occupy prominent positions in both government and the private sector. The original architecture of many small rooms and corridors surrounding a 441 square metre courtyard has been retained. A number of courses and classes for all ages and levels of ability are conducted here by a team of qualified art teachers.

The Art Centre is home to the Emirates Fine Arts Society, which was founded in 1980 with the aim of promoting the creative abilities of national and expatriate resident artists. The Society, which also has branches throughout the Emirates, is concerned with raising community awareness of the importance of art as a means of communication.

The Studios

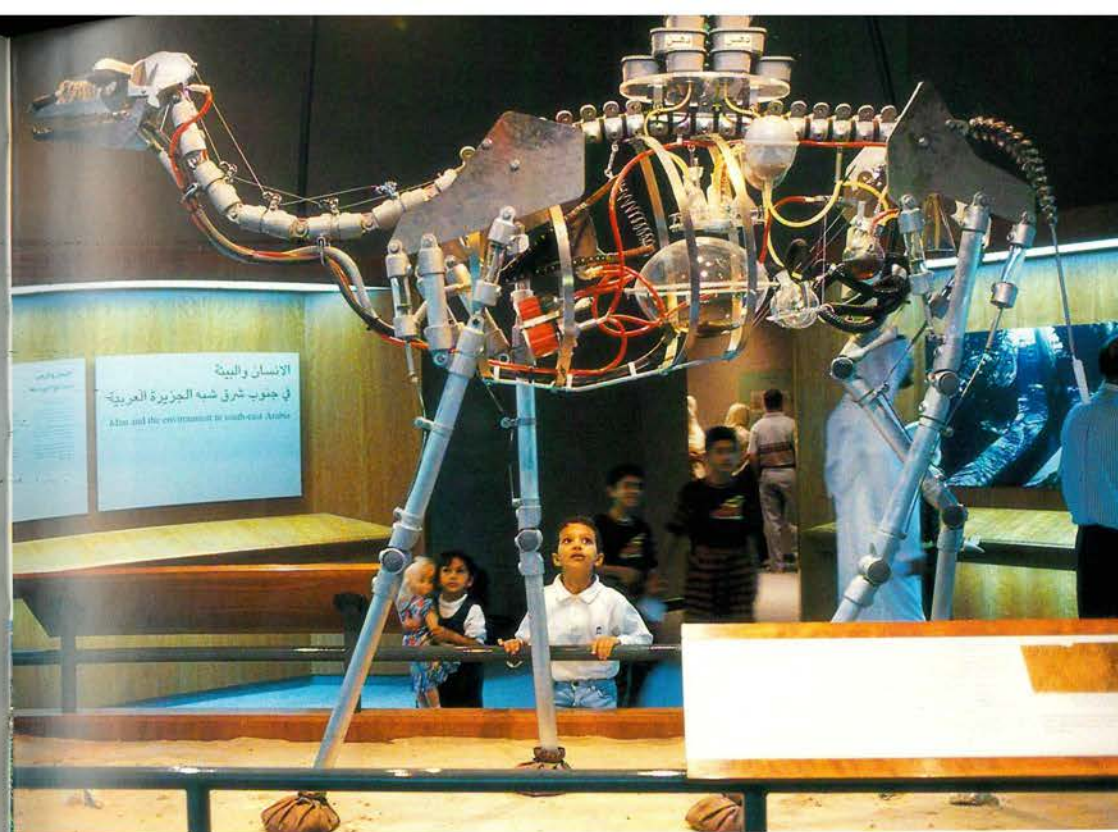
The Studios are located in the Obeid Al Shamsi house opposite the Art Centre. Artists from all over the world are invited here by the Sharjah Directorate of Arts to work and interact with one another. Their works are displayed regularly in the Art Museum on the other side of the main square.

Very Special Arts Studio

The former house of Abdulla Al Sari has been transformed into a studio for the disabled, called the Very Special Arts Studio, which is run by the Sharjah Humanitarian Services. The Arts Cafe, serving local meals and beverages in traditional decor, is also in the Al Sari house.

Sharjah Desert Park

In the middle of the low rolling sand dunes, 25 kilometres outside of Sharjah city, along a four-lane highway to the East Coast, lies the Sharjah Desert Park. This ecology park is being developed in stages: a state-of-the-art Natural History Museum was opened in November 1996 and has drawn some 250,000 visitors since then. A Children's Farm (petting zoo) opened in April 1997, while the Breeding Centre for Endangered Arabian Wildlife came on line in February 1998. Wildflower gardens with 12 different habitat plots and around 125 species of wild plants are being constantly upgraded. A modern facility called the Arabian Wildlife Centre, which will display a great variety of indigenous Arabian animals, is under construction. Pride of place will go to the Arabian leopard (*Panthera pardus nimr*), a rare subspecies only found in the mountains of Arabia.



Sharjah Natural History Museum

Sharjah Natural History Museum has five major exhibits, starting with a 35-metre long diorama of the habitats of Sharjah from coast to coast. Graphics explain desert features, animal adaptations, plant physiology, and the food web. Showcases hold smaller dioramas featuring mountain, sand and coastal habitats with their respective fauna as taxidermy specimens.

The second hall, featuring a large, loudly bellowing mechanical camel, demonstrates how man uses and abuses his environment. A 'pepper's ghost' display of the effects of pollution on the desert fascinates many, as do the locally made nature films. The next exhibit, spread over two floors, is a journey through time, leading from the very beginning of the universe to present day Sharjah via a spellbinding display of audio-visuals, dinosaur reconstructions and present day finds of fossils and rocks.

The botany hall features a number of interesting video-games and is being upgraded to include a series of flower models and hands-on puzzles and interactive games.

The last hall is dedicated to life in the Gulf and Indian Ocean. Walking, as it were, on the bottom of the sea you can see detailed models of marine creatures, as well as unique film footage of the underwater world on large screens. Rare animals like the elusive dugong or seacow, the sunfish and an immature whale shark can be admired at close quarters.

The Children's Farm

Situated opposite the Sharjah Natural History Museum, the Children's Farm offers an opportunity for urbanised children to see a cow being milked, or to feed carrots to goats and sheep. Pony rides are available for the smaller children and there are camels, donkeys, ducks, guinea fowl and other domestic animals to look at and pet. The lobby of the farm resembles a barnyard. Here you can find a demonstration beehive, where honey and pollen laden bees fly in and out through a perspex tube. And if you are lucky you can witness the miracle of the birth of baby quails on the incubator table. The kitchen serves milk and buttermilk drinks, as well as home-made cheeses. Plans for further development of this facility include organic vegetable gardens and a maze for small children.

The Breeding Centre for Endangered Arabian Animals

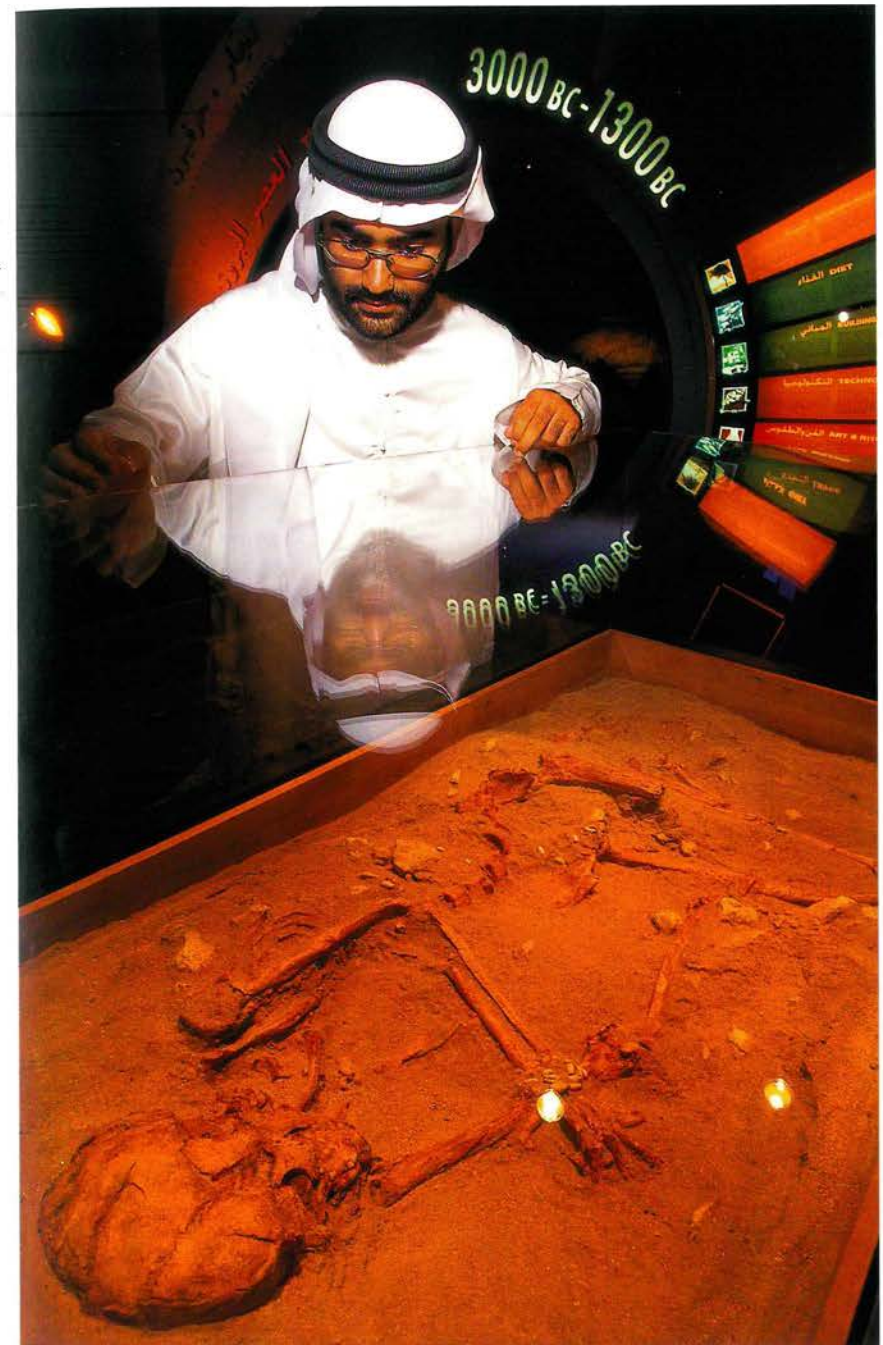
The Breeding Centre for Endangered Arabian Animals is dedicated to the captive breeding of endangered Arabian wildlife, a concept developed by the local conservation group, The Arabian Leopard Trust (ALT), and adopted and developed by the Ruler of Sharjah. The facility has a large number of spacious animal quarters and a building that houses offices, sick bay, laboratory and kitchens, as well as breeding quarters for small mammals, reptiles and food animals. The Breeding Centre will supply display animals for the future zoo, at the same time providing an opportunity for research into the life of some of the almost unknown desert species. Some animals may, at a later stage, be re-introduced into nature reserves.

Wildflower Gardens

Behind the Sharjah Natural History Museum ten paired plots of imported soil from ten different habitats in Sharjah emirate support plant communities from these habitats. One can see mountain trees like *Moringa peregrina* in flower, or the cactus-like *Caralluma*, or explore a wadi habitat with ferns and reeds and there are always some flowering shrubs around. The best season is between January and April, when many annuals appear. This living herbarium has a counterpart inside the museum, where a herbarium collection of some 1,500 pressed specimens (around 400 species) can be studied on request. To the north of the museum, the Wildlife Club of the American School in Dubai has also made a nature trail that leads through the nearby sandy plain and around a low sand dune. Special features are local plants and tracks of desert creatures – especially the spiny-tailed agamid.

Archaeological Museum

The Emirate of Sharjah has numerous archaeological sites of importance, from which many interesting and beautiful artefacts have been recovered in the last decade. A new state-of-the-art Archaeological Museum was opened in 1997 to display the collection in a way that will enhance people's interest in their heritage. Audio-visual displays, computer games and scaled models of ancient towns and houses have all been utilised to interpret and pass on knowledge. Among items of special interest is the golden head dress of a horse that was killed along with a camel in a ceremonial sacrifice in ancient times. Besides local finds, there is a large collection of items from other parts of the Middle East.



Sharjah Science Museum and Learning Centre

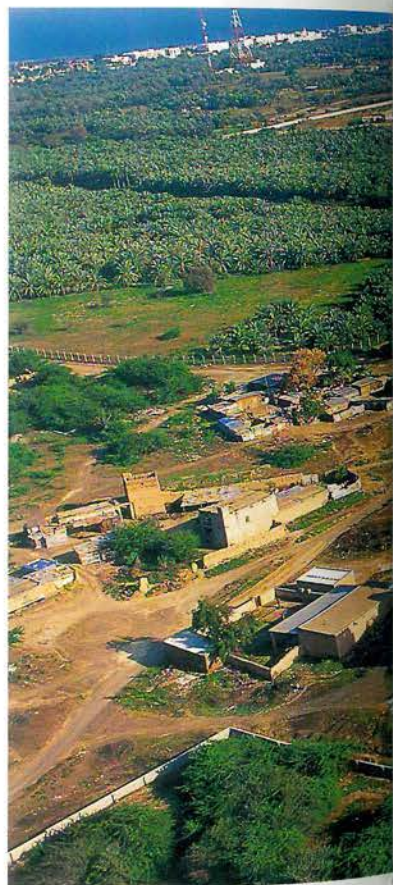
Another fairly new museum, opened in April 1996, is the Sharjah Science Museum and Learning Centre, which contains an exhibition hall where a number of scientific phenomena are explained, such as why balloons fly and how sound travels. Very lively demonstrations are given at various times during the day in a special hall. There is also a planetarium and a play area for very young children. The learning centre is specifically designed to support the teaching of science and technology in schools. Workshops are held on a regular basis, in which children can do a variety of experiments such as growing plants, building bridge models or printing tee-shirts. A well-stocked computer hall teaches computer basics, including internet skills. The library has many books, videos and CDs.

Fujairah

Fujairah already has a museum in a modern building, however, a large traditional old building adjacent to the Old Fort has been renovated to house a new Fujairah Museum due to open in late 1998. Archaeological relics and findings unearthed in Fujairah in the last 20 years will be displayed in four big exhibition halls in the new museum.

Work is also proceeding on the restoration of buildings in Fujairah's traditional mud-brick village. Dominated by the Old Fort, the village on the edge of date-palm groves was abandoned only in the last three decades or so as the people moved to newer concrete and breezeblock houses, which have since been largely replaced by more modern housing. The mud-brick village has long been scheduled for restoration, to provide the Fujairah of today with a window on its traditional, less prosperous past, and work on the restoration programme began in earnest late in 1997.

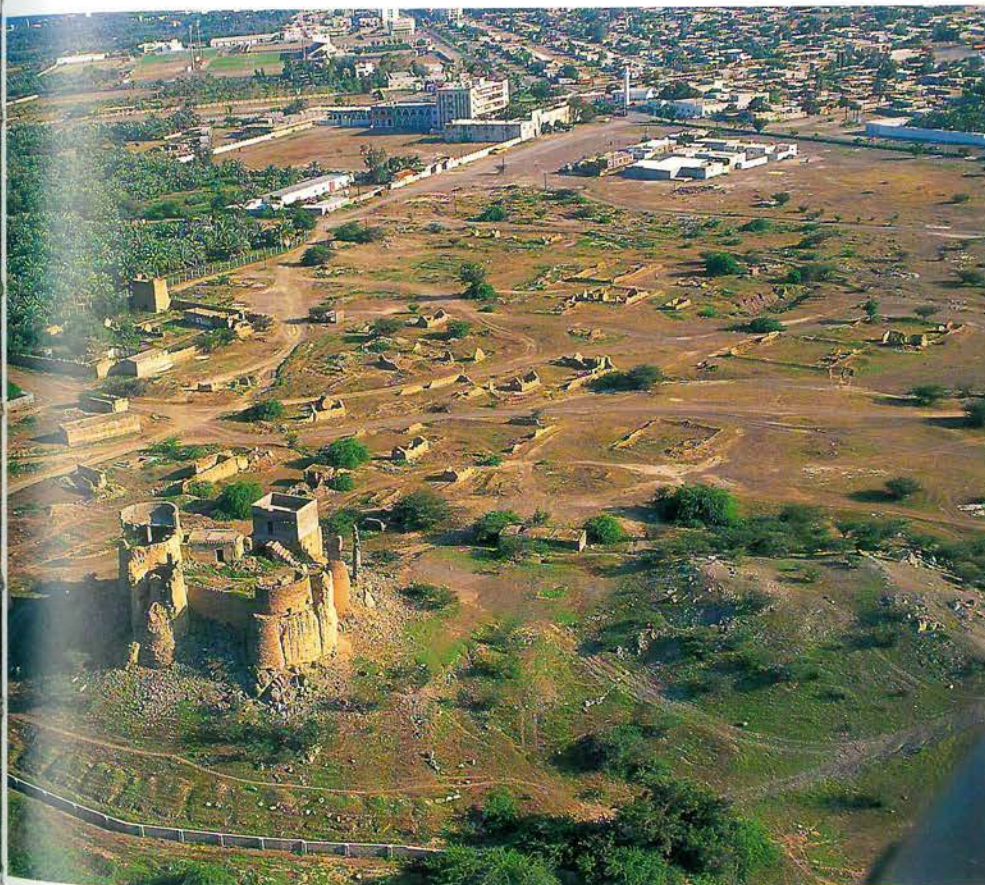
One objective is to provide a genuine heritage village that will prove an attraction for the growing number of visitors to the East Coast. The focus of the restoration programme is the Old Fort itself. Elsewhere in the village, a number of other smaller, but also impressive, fortified buildings survive. Some of these are now occupied by labourers in the nearby palm groves, unconcerned about the history around them. Since the palm groves are still being cultivated, producing not only dates but, from planting under and between the trees, a variety of fruits and vegetables, the whole scheme, when complete, should permit Fujairah to offer visitors an authentic insight of the country's traditional way of life.



Ras al-Khaimah

The fort at Ras al-Khaimah, converted into a museum in the late 1980s, houses collections of archaeological, natural history and ethnographic items. The entrance to the fort is of the tortuous narrow kind that gave protection from invading marauders. In the mailis and the halls above it on the second floor, many daily life necessities, including clothing, are on display, together with old manuscripts and weapons. The main archaeological collection is housed in the wing on the opposite side of the shaded cobble-stone courtyard. The smaller south wing has a display of shells and other natural history related finds. Narrow stairways lead up to the parapets of the fort and the original architecture has been well restored throughout the building.

The Ibn Majid Folklore Society has also opened a heritage museum in Ras al-Khaimah to commemorate the memory of the famous Arab navigator, whilst Ras al-Khaimah's Fine Art Association has focused on the fostering of artistic skills amongst young artists in this northern emirate.



EXPO '98

Entitled 'Seas and Oceans – A Heritage for the Future', the marine heritage of the UAE provided the central theme of the country's pavilion at EXPO '98 held in the Portuguese capital, Lisbon. The EXPO is the last in the four-year cycle to take place this century, coinciding with the five hundredth anniversary of the beginning of the major Portuguese explorations, which included the first rounding of the Cape of Good Hope and the arrival of the Portuguese in the Indian Ocean.

The Fairs and Exhibitions Department of the Ministry of Information and Culture utilised the latest in modern technology to display the heritage, and progress of the country at EXPO '98 in which over 140 countries participated.

Over two million visitors visited the UAE pavilion during the summer exhibition. Overall, the widely-acclaimed exhibit covered an area of 1,400 square metres. Centrepiece of the display was a replica of a huge trading dhow equipped with a 300-seat cinema showing an impressive 3-D film on the country. Entitled 'It Was Not A Dream' the state-of-the-art film, portraying the country's heritage as well as the renaissance of the last quarter of a century, was made on location throughout the UAE.

Surrounding the dhow were demonstrations of the heritage and history of the pearling industry, including evocative 'live' displays of pearling and fishing songs and dances, net and rope-making, as well as the opening of pearl oysters. Computer-controlled lighting contributed enormously to the atmospheric setting.

A bank of six computers provided intranet information on the UAE and engaged visitors in an interactive quiz, the weekly prize being a holiday for two in the UAE. Needless to say this proved to be a popular attraction.

Within the pavilion, there was also an artistic display of artefacts from archaeological excavations throughout the country depicting both the way in which the people of the Emirates made use of their marine resources and also the maritime commerce of the country.

Traditional music and dance shows presented by the National Popular Arts Band in front of the Arab and GCC pavilions were a resounding success, the throbbing rhythm of the drums drawing crowds from far afield.

Special events, including a seminar on the Ras al-Khaimah-born navigator Ibn Majid, were staged on UAE Day at EXPO, held on 7 August to coincide with the thirty-second anniversary of the accession of Sheikh Zayed as Ruler of Abu Dhabi in 1966.

The Ministry of Information and Culture provided visitors to the pavilion with a number of special high-quality brochures and other publications focusing on the maritime traditions of the UAE as well as the oceans in general.



Amongst the new books launched for the occasion were *Waves of Time: The Marine Heritage of the UAE* and *Four-Fifths: The Ocean Planet*.

Produced by Trident Press of Britain with support from the Ministry, *Waves of Time* provides a wide-ranging introduction to the relationship between the people of the UAE and the sea. Edited by Peter Hellyer, the Managing Editor of *Emirates News*, the book includes three chapters on marine aspects of the country's archaeology and history, a chapter on the famous Ras al-Khaimah pilot and seafarer Ahmed Ibn Majid, and other chapters on the pearling and boat building industries, marine resources, such as fish and shellfish, the beginnings of the offshore oil industry and the early days of surveying and mapping of the waters and islands of the southern Arabian Gulf.

Among contributors are Professor Daniel Potts of Sydney University, Dr Joseph Elders, of the Abu Dhabi Islands Archaeological Survey, ornithologist and ecologist Simon Aspinall, former British Royal Navy surveyor Lt Commander Andrew David and petroleum historian Stephen Howarth, as well as the book's publisher, marine biologist Dr Peter Vine.

In a foreword to the book, Minister of Information and Culture Sheikh Abdullah bin Zayed Al Nahyan notes that: The United Arab Emirates is in the true sense of the word a maritime nation. Not only does it possess over 800 kilometres of mainland coastline and a large number of islands in both the Arabian Gulf and the Arabian Sea, it also has a long and proud tradition of sailing, navigation, boat building, pearl fishing and marine trading.

The archaeological record has also yielded uncontrovertible evidence of the UAE's intimate maritime commercial links with ancient civilisations. Indeed, in later times, Emirati seafarers were skilled navigators, much sought after for their knowledge on Indian Ocean navigation. Best known of these was Ahmed Ibn Majid, born at Julfar, old Ras al-Khaimah, whose memory has lived on to this day as one of the most respected Arab scientists and writers'.

Lavishly illustrated with colour photographs, the book publishes for the first time a number of charts and maps of the UAE's coastal towns and islands drawn by early marine surveyors in the early nineteenth century, uncovered during research into the archives of Britain's Royal Navy.

The book offers the first detailed examination of the role played by the sea and its resources in the life of the people of the UAE over the last six or seven thousand years, and should prove of interest to anyone curious about the country's past. As Sheikh Abdullah comments, *Waves of Time* is 'a valuable summary of the UAE's marine heritage and a reminder of the deep love and respect which the people of the UAE have for the sea.'

Four-Fifths: The Ocean Planet, also produced by Trident Press and sponsored by the Ministry, was launched at EXPO '98 by Michael Sutton of World Wide Fund for Nature whose logo appears on the cover. WWF will receive a contribution for each book sold.

In contrast to *Waves of Time*, *Four-Fifths: The Ocean Planet* focuses on the global maritime heritage, providing a pictorial tour of the world's oceans, from the Arctic to the Antarctic. It is a truly inspiring celebration of the natural richness of our seas, featuring stunning images of marine-life taken by a number of award-winning photographers. Captions are in six languages, including Arabic. The book's thoughtful design reinforces its title, emphasising that the major part of our globe is covered by ocean.

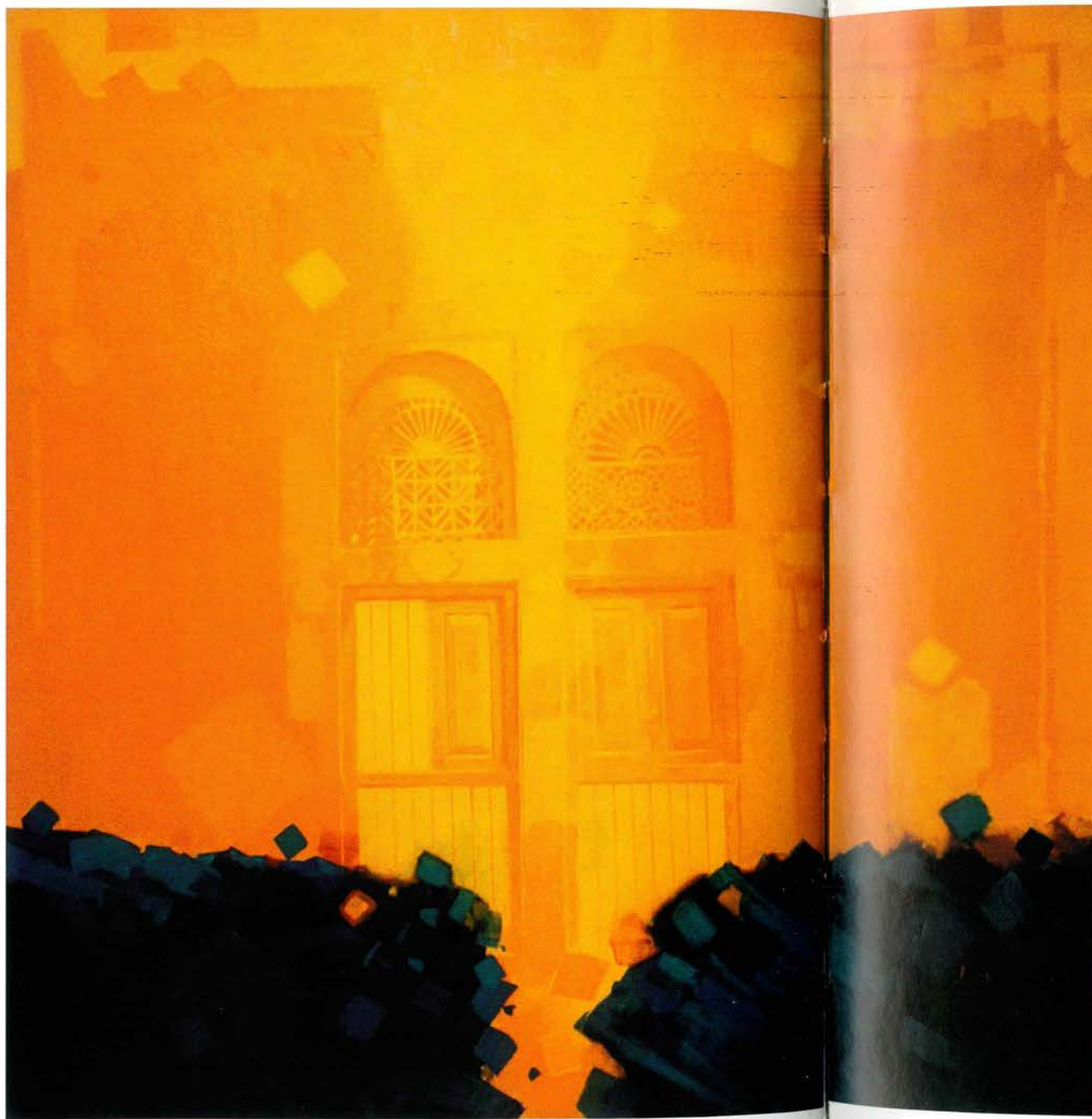
Chelsea Flower Show

The Garden of Life, showpiece of the UAE, was awarded a gold Royal Horticultural Society medal at the prestigious Chelsea Flower Show in June 1998. The UAE entry was an Arab style central garden surrounded by cool, green date palms, set among a variety of desert flora growing in sand specially flown into London for the occasion. Visitors to the Show were astonished and delighted by the beauty and tranquillity of the Garden of Life, at the same time expressing their amazement that something so 'green and lush' could have emanated from what they perceived as an arid desert.



THE RISE OF THE UAE'S ARTISTIC MOVEMENT

Art in the UAE has traditionally had a practical focus – life in the desert was simply too hard to allow time for non-essentials. As a result the visual arts were restricted to the decoration of everyday items – ceramics were lovingly crafted, weapons highly decorated, traditional architecture adorned, rugs beautifully woven and doors elaborately carved. As life in the UAE has changed beyond all recognition over recent decades, so art has changed, developed and grown.



There are two factors that may have contributed largely to the rapid rise of the UAE's artistic movement. Firstly, UAE citizens now enjoy a lifestyle that allows the luxury of time for creative and vocational activities and secondly, as the economy has developed and life has changed forever, the country has determined not to forget its heritage. These factors, combined with the inherent creativity within its people, have led to a resurgence in interest in art in recent years – what better way to record the heritage of the UAE than in paint, sculpture and photography?

Evidence of the rise of artistic awareness is everywhere. Art galleries and cultural centres (see Heritage and Culture) have sprung up throughout the Emirates and, not content with merely admiring the art of others, more and more people are signing up for art classes as a form of relaxation or self-improvement.

Whilst Sharjah has the carefully restored Arts Area, a series of well finished buildings dating back to the eighteenth century that house an artisan's world in a traditional setting, Dubai has the International Arts Centre and Courtyard and Abu Dhabi has its Cultural Foundation. Each centre offers not only exhibition but also teaching and working studios – as a result artists are working together in clusters across the UAE in the same way that artists have gathered together across the world throughout history.

The growth and quality of art created in the UAE has been such that the country has attracted the attention of the artworld at large. Tebra – an association for creative young Emirati women – put UAE women on the world map of art when they received recognition from ASDEC (Art Sponsorship in the Developing Emerging Countries). Individual Tebra artists have had the opportunity to showcase their work and Sheika Hessah Maktoum, eldest child of Dubai's ruler and UAE Vice President HH Sheikh Maktoum bin Rashid, enjoyed success at her solo exhibition, *Reflections*, in Paris in 1995.

The execution and appreciation of art spans all barriers and, in the UAE, the artworld is as varied and as cosmopolitan as the society itself. As artists pay more attention to their own cultural heritage and explore old styles and techniques to create modern works of art the UAE artworld is sure to become increasingly varied.

Painting by: Abdul Qader Al Rais.

MEDIA

The UAE, like many other countries, is debating the impact of a burgeoning global communications network on the values and ethics cherished by UAE society. Nevertheless, there is a deep appreciation that an isolationist outlook is not the answer to the problems brought about by rapidly-developing information sources, but that negative impacts must be limited and the local media encouraged to meet their social responsibilities.

Minister of Information and Culture Sheikh Abdullah bin Zayed Al Nahyan, speaking at the First Gulf Newspapers Conference in March 1998, stressed that the Emirates has adopted an 'open skies policy' on information, 'because we believe in the free flow of information. Any attempt to place constraints on the free flow of information is futile. We also acknowledge the importance of a lot of the information that reaches us from abroad.'

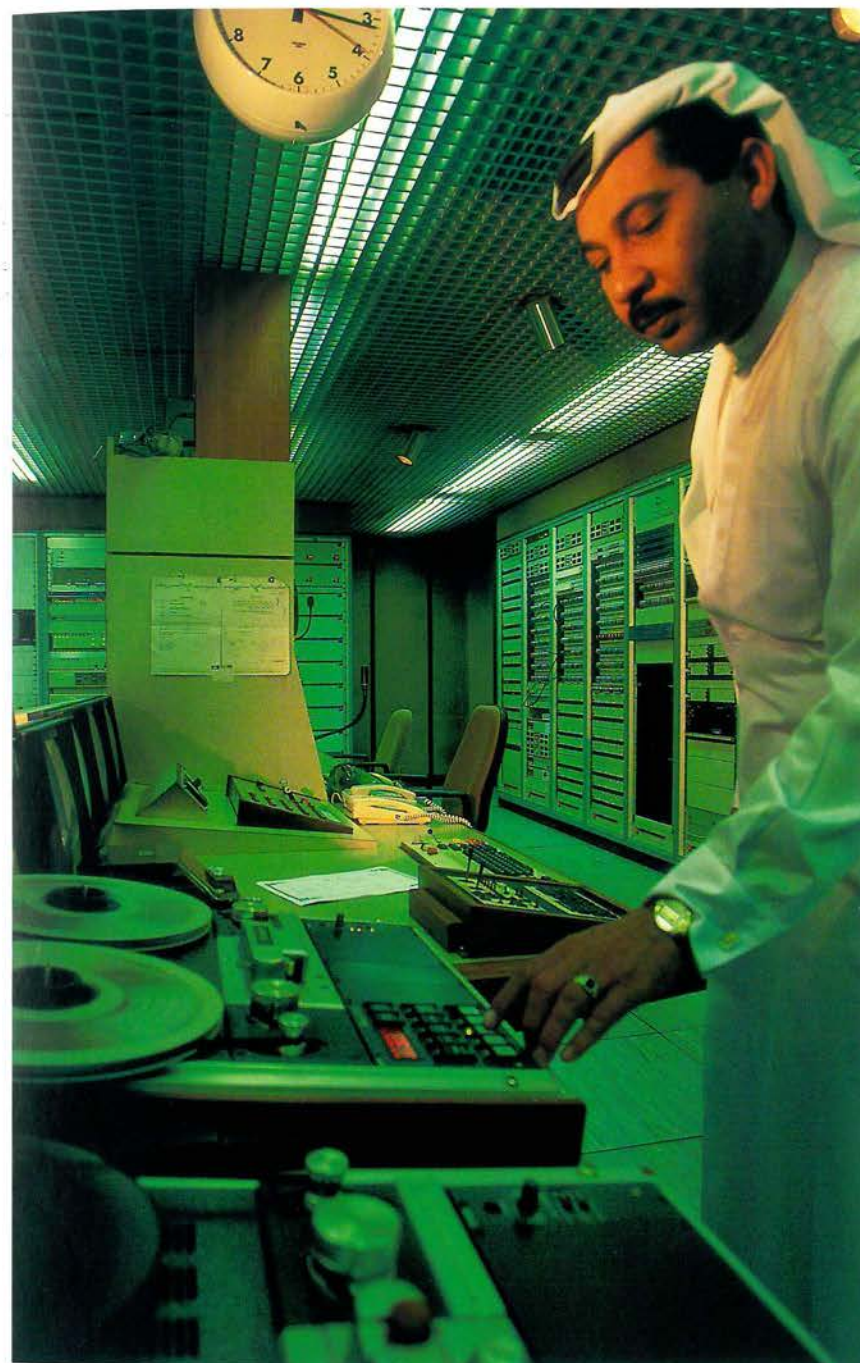
Although Sheikh Abdullah noted that the government was 'well aware that some of the material that may arrive is in contradiction with our values and basic beliefs', he indicated that the best way to 'dilute' the negative effects was 'through the development and modernisation of our own domestic media. It is our task to ensure that our own domestic media is of such a quality that it can provide an attractive local alternative view. There is no point in trying to ignore the changes that have taken place in the international media over the last few decades. The Information Revolution is with us. It is a fact. As part of changes in government policy designed to deal with the changes, the Ministry of Information and Culture has now completed a series of planned amendments to the existing Press and Publications Law', Sheikh Abdullah said, adding that these 'will provide strong guarantees that will enable our press to perform its duties freely and with responsibility.'

The Conference, the first to be held in the region, was jointly organised by the World Association of Newspapers, the An-Nahar group of Lebanon and the Al Ittihad Corporation, publishers of *Emirates News*, and the Arabic daily, *Al Ittihad*.

Radio and television

Since UAE TV commenced transmission from Abu Dhabi in August 1969, Dubai, Sharjah, and recently Ajman, have all established television stations. Dubai Television was the first television service to broadcast its programmes in Arabic from London, via a local cable network, and its satellite channel is considered one of the most successful among the Arab channels now available worldwide.

Establishment in 1995 of the Emirates Television and Broadcasting Corporation, based in Abu Dhabi, was an important milestone in the UAE's efforts to upgrade its mass communications network.



In November 1996, the government of Umm al-Qaiwain obtained approval from the relevant authorities to establish a television station. A licence to set up a TV station in the Emirate of Fujairah has also been obtained by the government of Fujairah.

A cable television network project is also being developed and implemented by ETISALAT. The network is planning nationwide coverage, and an initial pilot phase aims to provide services to 20,000 residential units in Abu Dhabi and Dubai by the end of 1998.

ETISALAT will be using state-of-the-art technology in the project which will be a 'true' cable network. A wide variety of entertainment will be available, including educational, information, audio/video interactive and pay per view cable TV. Programme packages, ranging from 30 to over 100 channel, are designed to suit the wide range of ethnic, educational and diverse economic background of UAE residents and will include some available exclusively to this service. Another advantage will be the provision of top-quality technical and subscriber services.

Radio broadcasting stations are to be found in Abu Dhabi, Dubai, Ras al-Khaimah, Umm al-Qaiwain and Ajman. Emirates FM, offering an up-to-date selection of programmes, was introduced by Abu Dhabi radio in 1996. UAE Radio from Abu Dhabi is also transmitted by short-wave, reaching great distances and listened to by many people who have an interest in the region.

The United Arab Emirates Radio from Ajman (FM4) commenced broadcasting on 7 June 1997 on the 104.8 MHz frequency. Content includes news, entertainment and cultural programmes in English. An Arabic FM service is to follow. Umm al-Qaiwain has also applied for permission to establish an FM radio station.

The Press

It is UAE policy to encourage a free press, subject only to normal constraints underpinning the spiritual, moral and political integrity of the country and its people. News gathering and dissemination throughout the region has been greatly assisted by the Emirates News Agency, WAM, which commenced transmission of its special news service in 1977 and sends news reports, pictures and information to the world's media, in English and Arabic, for approximately 18 hours per day. In all it covers over 222 destinations.

In the field of UAE newspaper publishing the Al Ittihad Corporation for Press and Publications publishes the *Al Ittihad* newspaper in Arabic and *Emirates News* in English, as well as the weekly *Zahrat al-Khaleej* and *Majid* magazine. In Dubai the Al Bayan Corporation for Press and Publications produces *Al Bayan* newspaper, together with a weekly *Sports and Youth* magazine, a weekly supplement and the *Emirates Today* magazine. *The Khaleej Times*, also based in Dubai, publishes its English language daily newspaper, a weekly magazine, special supplements, Young Times magazine for children and *Al Hadaf*, a sports magazine published in Arabic. *Gulf News* is another Dubai-based newspaper and the company also publishes a *Gulf Weekly* magazine, together with the *Junior News* magazine for children.

The Sharjah-based company, Dar al-Khaleej for Press and Publications, publishes a daily newspaper, *Al Khaleej*, along with a weekly magazine, *Al Shurouq* and several

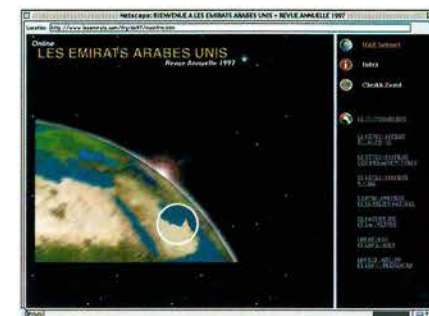


other periodicals. In March 1996, it launched its weekly *Economist* magazine followed by launch of a new English daily in April, *Gulf Today*. In addition to the above mentioned publications there are over 60 other magazines and periodicals published in the UAE, covering a wide range of professional, cultural, scientific, leisure and sporting interests.

Internet

Three years is a very long time in terms of internet technology. In 1996, the UAE Yearbook wrote about introduction of the internet to the UAE. It was one of the first Arab countries to embrace internet communications and realise the business and educational potential of the WorldWideWeb. We wrote at that time about some of the first internet presentations on the UAE: sites such as UAE Interact which was launched by Sheikh Abdullah bin Zayed, Minister of Information and Culture, on the twenty-fifth anniversary of the UAE in order to provide a comprehensive information database on the country; and the ECSSR web site which came on stream at the same time and provided easy access to conference and seminar proceedings at the centre.

In 1997, a year later, the Yearbook published a more comprehensive account of the internet's emerging impact on media and business communications in the Emirates. The book utilised a number of web pages as illustrations and listed some of the web sites of most relevance to UAE-watchers.





Intranet computers delivering WWW presentation at UAE pavilion, EXPO '98.

The 1998 Yearbook extends the focus in order to report on the widening impact of the internet in the Emirates. Almost every major company in the UAE and a large number of smaller enterprises and individuals or organisations now have their own web page. The Ministry of Information and Culture, which has been at the forefront of the UAE's internet revolution, has further extended its activities. In addition to daily updating of its UAE Interact web site it has introduced a new site, www.the-embirates.com, which is a launching base for its main web activities and provides ready access to extensive web presentations on the UAE in Arabic, English, French, German, Spanish, Portuguese languages. These on-line web sites have become essential reading for many people around the world who need to keep up to date with happenings in the UAE.

The sites also appeal to a broader audience, through running of UAE Interact's on-line quiz in which prizes of flights to the Emirates are sponsored by Emirates airline. To date six people have enjoyed these free holidays to the UAE. In addition to providing a vital and expanding information service, the internet sites have been rich in feedback from readers, inspiring new efforts by the Ministry of Information and Culture to meet the needs of its web-based community.

Taking the rapidly developing global familiarity with the internet as its cue, the UAE pavilion at EXPO '98 set up six intranet computers which delivered WWW style presentations on the UAE and hosted what became the most popular interactive quiz at the



whole of EXPO 98, with weekly prizes, sponsored by Gulf Air and the Intercontinental Hotel, Abu Dhabi, of holidays in the UAE. Not only were 32 such holidays won during the 16 weeks of EXPO '98, with the intranet computers forming one of the most popular aspects of the UAE pavilion, but the project also formed the basis for a fascinating statistical survey of visitors to the pavilion, which was regularly among the top six pavilions in the weekly analysis. From a technology viewpoint it is worth mentioning that this project, involving the intranet, web pages and in-situ server was administered from a remote location and continued to function, without a glitch, throughout the exhibition period.

It is now a matter of course for the internet to be used at major meetings, with reports being placed on-line within minutes of them happening. The first live web-casting of such meetings took place at the Abu Dhabi Arab Gulf Co-operation Council summit meeting in December 1998 where the latest technology was employed to bring worldwide reporting of the summit meeting to a wide audience.

As with all such rapidly progressing technologies the challenge is not just to keep up with developments but to

participate actively in creating the opportunities for these to play a useful role in the lives of ordinary people. The UAE government is acutely aware of this and is constantly reviewing innovative ideas on how best to harness the internet for the good of the country. Recent advances in internet telephony offer new challenges, as do the international moves to create a secure basis for electronic commerce. The UAE is particularly well placed to benefit from these developments, given its low tax and tax-free environments, its long history of trading and its knowledge of global marketing.

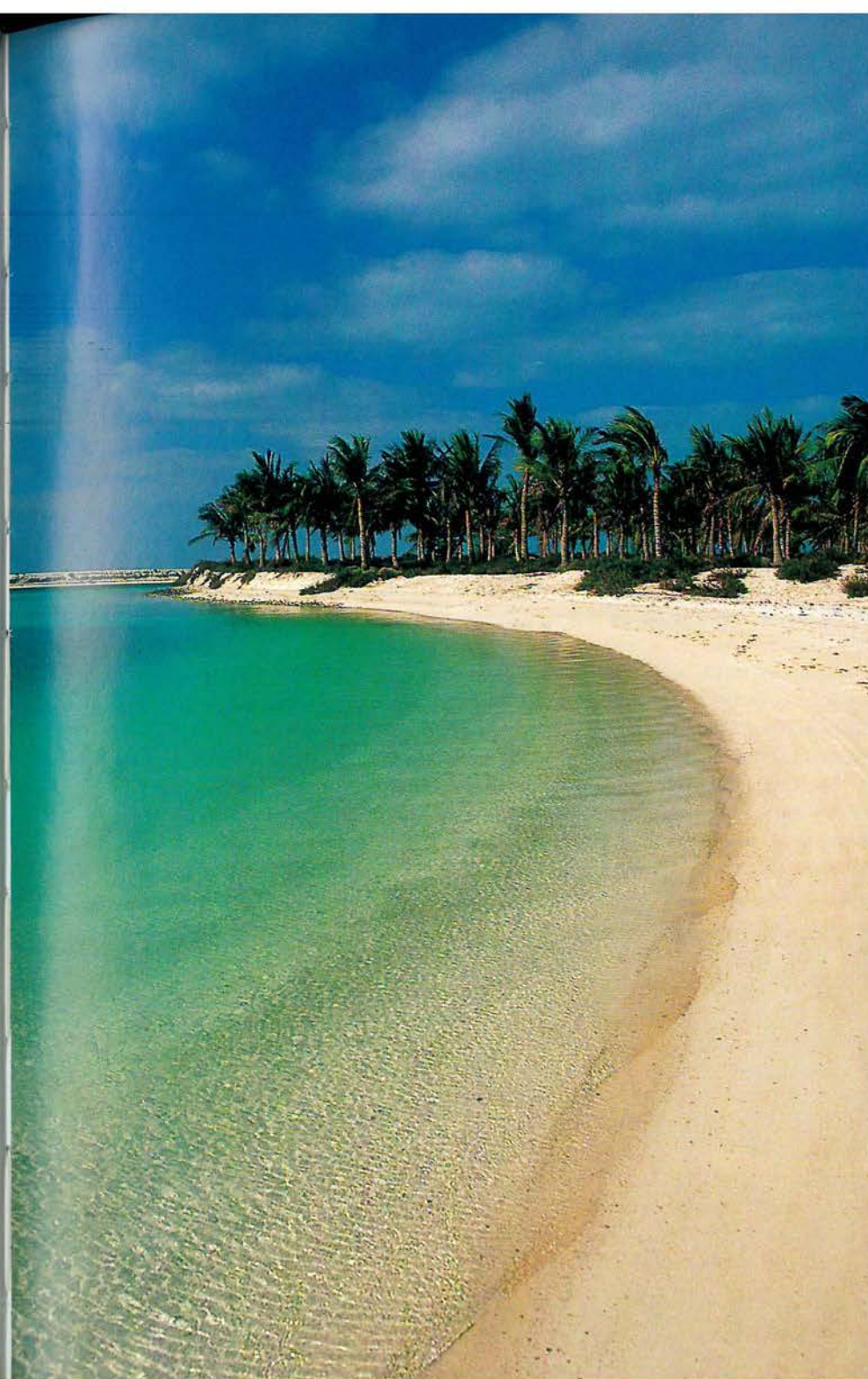
In the short period of three years both the internet and the UAE have advanced significantly. By taking early steps to remain in tune with modern technologies, the UAE's citizens have already felt the benefits of the government's policies but the best is yet to come. Read this space next year.

SOME UAE INTERNET URLS

Ministry of Information & Culture sites:

UAE Interact
The Emirates
English, Arabic, French, Spanish, Portuguese, German
Les Émirats
Ministry of Economy & Commerce
Ministry of Finance and Industry
The Emirates Center for Strategic Studies and Research
Cultural Foundation
Dubai Museum
Sharjah Museum
Ajman Pages (culture and heritage)
United Arab Emirates University
Higher Colleges of Technology
Ajman University
CERT
Emirates Telecommunications Corporation - Etisalat
Jebel Ali Free Zone
Ajman Free Trade Zone
Hamriyah Free Zone
Ras al-Khaimah Industrial Free Zone
Sharjah Airport International Free Zone
Abu Dhabi International Exhibition Centre
Abu Dhabi International Exhibitions
Dubai World Trade Centre
Abu Dhabi Chamber Of Commerce and Industry
Dubai Chamber of Commerce and Industry
Dubai Commerce and Tourism Promotion Board
Ajman Chamber of Commerce and Industry
Sharjah Commerce & Tourism Development Authority
Abu Dhabi Investment Company
Abu Dhabi Municipality
Dubai Municipality
Department of Ports & Customs - Dubai
Emirates Airlines
Emirates Bank International
Dubai On-Line
Arabian Wildlife
National Avian Research Centre

<http://www.uaeinteract.com>
<http://www.the-emirates.com>
<http://www.lesemirats.com>
<http://www.economy.gov.ae>
<http://www.fedfin.gov.ae>
<http://www.ecssr.ac.ae>
<http://www.cultural.org.ae>
<http://www.dm.gov.ae/museum>
<http://www.shjmuseum.gov.ae>
<http://members.tripod.com/~saif>
<http://www.uaeu.ac.ae/>
<http://www.hct.ac.ae/>
<http://www.ajman.ac.ae>
<http://www.hct.ac.ae/certhome.htm>
<http://www.etisalat.co.ae>
<http://www.jafza.com>
<http://www.ajmanfreezone.com>
<http://www.hamriyahfz.com>
<http://www.rakiftz.com>
<http://www.saif-zone.com>
<http://www.adccuae.com/adiecctr>
<http://www.adcc1-uae.com>
<http://www.dwtcuae.com>
<http://www.adcci.com>
<http://www.dcci.org>
<http://www.dctpb.gov.ae/>
<http://www.ajcci.co.ae>
<http://www.sharjah-welcome.com>
<http://www.adic.com>
<http://www.admtp.com>
<http://www.dm.gov.ae>
<http://www.dxbcustoms.gov.ae>
<http://www.ekgroup.com>
<http://www.ebil.co.ae/ebi>
<http://www.dubai-online.com>
<http://www.arabianwildlife.com>
<http://www.narc.gov.ae>



ENVIRONMENT AND WILDLIFE

Strategically positioned close to the entrance of the Arabian Gulf, and with extensive coastlines on its west and north facing shores, together with an easterly coastline bordering the Arabian Sea, the Emirates' contrasting scenery provides a variety of habitats for a rich assemblage of wildlife; from the high almost impenetrable mountains and steep wadis of the northern emirates to the wind-sculpted sand dunes of the Rub al-Khali, and the low-lying sabkha salt-flats and numerous offshore islands that fringe the coast.

The varied landscape and wide-ranging climate supports a greater diversity of flora and fauna than might be expected in a land more renowned for its deserts than its wildlife. For example, rugged mountain slopes and isolated rocky cliffs provide a unique refuge for surviving remnants of Arabian leopard, tahr and caracal populations. More common are Arabian or mountain gazelle, desert-adapted small mammals such as hare, fox, wildcat, hedgehog, jerboas, gerbils, and girds, as well as a host of reptiles and insects.

Among the UAE's many natural fascinations is the fact that it is a superb place to watch birds. Some 410 species have been reliably recorded in the country since records began about 25 years ago. Of these about 100 breed regularly, the balance being passage migrants, winter visitors and accidentals. The primary reason for such a wealth of birdlife in such a relatively small country is its geographical location: the UAE is situated on a migratory cross-roads where a north-south flyway conveys species between the main Palaearctic landmass and Africa, while a less-used east-west route takes birds between the Near East and the Indian subcontinent. Add to this an influx of Indian Ocean seabirds in summer and a scattering of Siberian vagrants in autumn and you have a recipe for exciting birdwatching throughout the year. Residents and migrants alike take advantage of extensive new plantations resulting from the UAE's afforestation and landscaping programmes.

A recently published book – *The Shell Birdwatching Guide to the UAE* – describes the best places to find birds in the Emirates. Waders and other waterbirds may be seen at the Al Ghar lakes near Abu Dhabi, the top of Dubai Creek, the tidal inlets between Ajman and Ras al-Khaimah, and Khor Kalba on the East Coast. The latter location is also the only place in the world where one can see the Kalba subspecies of white-collared kingfisher (*Halcyon chloris kalbaensis*). The grass golf courses of Dubai (Emirates Golf Club, Nad al-Sheba and Dubai Creek Golf Club) attract many different species of birds, while the irrigated parks in Dubai and Sharjah provide a haven for song birds. The Sharjah Desert Park, in the middle of the sand dunes between Sharjah and Dhaid, is fast becoming a site of bird-watching importance as it has both desert and garden birds, while water birds may follow as soon as the planned ponds have been constructed.



The sea also offers a bounty of wildlife. Ringing the shallows, mangroves protect the shore from erosion as well as creating important habitats for a large number of crustaceans, fish and other flora and fauna. The importance of mangroves has been well recognised in the UAE where they are planted to form new barriers, especially along the edges of reclaimed land.

Further out to sea East Coast coral reefs and offshore Gulf coast diving sites support plentiful fishlife, from tiny coral dwelling species to big marlin, sailfish, manta rays and even the largest fish in the sea, the whaleshark. In addition, there are numerous marine mammals, elusive dugongs who feed on sea-grasses, whales and dolphins. Perhaps a third of the 80 known species of whales and dolphins, or cetaceans as they are collectively called, may occur off the shores of the Emirates. Species represented include the mighty sperm whale (*Physeter macrocephalus*), Risso's dolphin (*Grampus griseus*), Indo-Pacific humpback dolphin (*Sousa chinensis*) and the rare finless porpoise (*Neophocaena phocaenoides*).



Protecting the environment

The UAE is particularly proud of its valuable natural resources and has made every effort to minimise the impact of rapid economic development. Sheikh Zayed's speech on the UAE's first Environment Day, 4 February 1998, excerpts from which are quoted below, encapsulates the country's approach to its environment and wildlife.

For us, the conservation of our environment, of its habitat and of the wildlife that lives within it is not a new concern. It is genuine and deep-rooted and we have called for it for years. It was a subject of importance to us long before it became one of the great international topics of the closing years of this century.

We cherish our environment because it is an integral part of our country, our history and our heritage. On land and in the sea, our forefathers lived and survived in this environment. They were able to do so only because they recognised the need to conserve it, to take from it only what they needed to live and to preserve it for succeeding generations.

We today, all of us who live in this blessed land of ours, have a similar responsibility to cherish and protect our environment and our wildlife – not simply for ourselves but for our children and our children's children. That is a duty that we owe to our forefathers and to our descendants.

The beauty of our environment and our wildlife is a gift given to us by Almighty God. The gracefulness of a herd of running gazelles, the power of a soaring falcon – whom among men can fail to have his heart moved by such beauty?

We were deeply honoured last year to be given the Gold Panda Award of the World Wide Fund for Nature, which we received as a token not of individual recognition but as a recognition of the commitment of the country as a whole, and of its people, to the cause of conservation of the environment and wildlife.

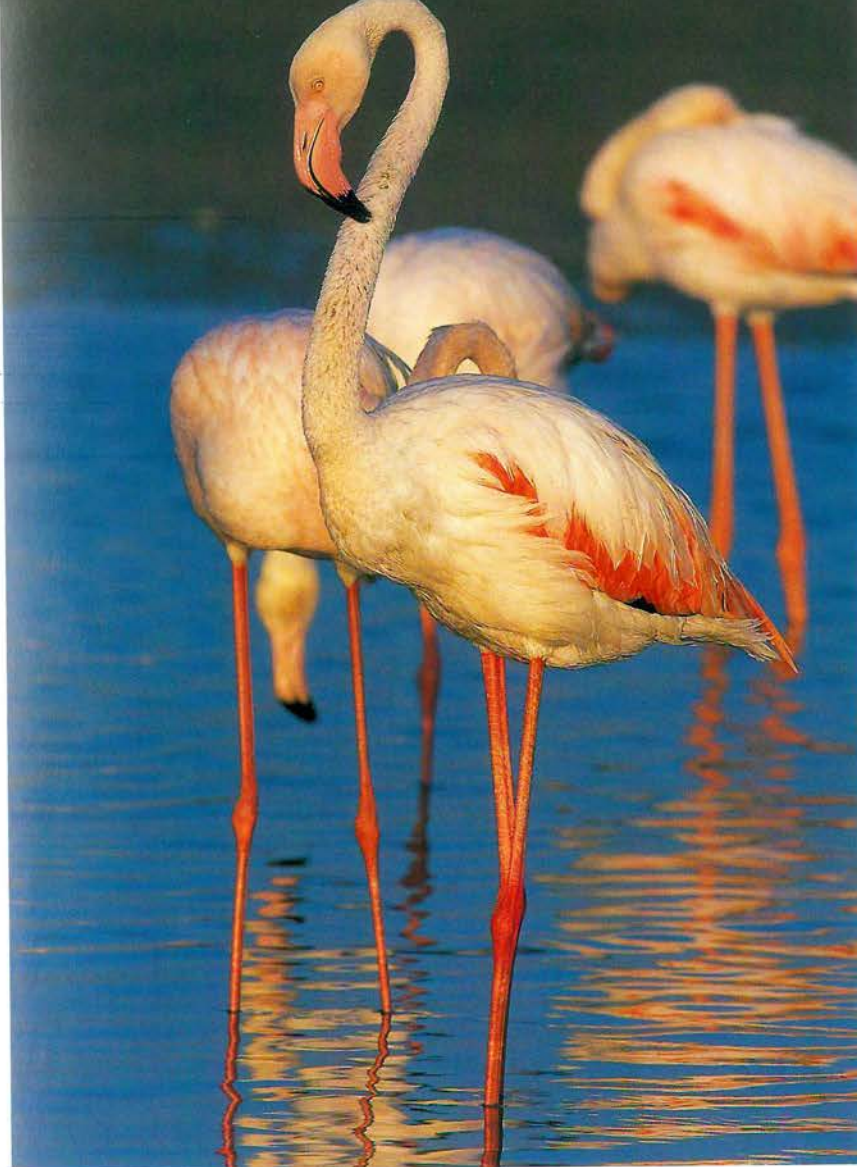
Today, we stress that conservation of the environment is not, and must not be seen as, a matter only for Government or for officials. It is something that concerns us all. When our environment is damaged, we all suffer.

... In the United Arab Emirates, we can be proud of some of the things that have been achieved. Thanks to the banning of hunting twenty years ago, our wild populations of gazelles and other animals are once again flourishing. We have helped to preserve the great Arabian oryx from extinction.

Through the planting of millions of trees and extending cultivation over large areas of our land, we have helped to contribute to the restoration of habitats that once existed here many thousands of years ago and to encourage millions of migrant birds to over-winter in our land. There is, though, much more that can, and must, be done, for the threats to our environment are continuous and growing. This is a responsibility for all, of every member of our society, both nationals and other residents. In that process, we must all play our part. It is not necessary to be a scientist. We can all love, understand and protect the things that we cherish.

Many years ago, scientists told us that it was not possible to develop agriculture in this land of ours. We told them that we would try and that, if Almighty God so willed, and with determination, we would succeed. We have shown that it is possible and the results are now visible all around us.

With God's will, too, we shall continue to work to protect our environment and our wildlife, as did our forefathers before us. It is a duty – and, if we fail, our children, rightly, will reproach us for squandering an essential part of their inheritance and of our heritage.



Environmentalism can be said to have really come of age in the UAE in 1998. Further new environmental legislation was passed and a degree of institutional strengthening undertaken, which will undoubtedly contribute to a greater awareness of the country's rich heritage and environment; and facilitate its protection and sustainable utilisation. Institutionally speaking, the UAE now has vastly improved environmental agencies, without cumbersome administrative structures, which, in consequence, permit maximum effort to be expended where it is most needed. The prospects for research and development of natural resources country-wide have never been so good.

The Federal Environmental Agency (FEA) propounded 'An Everlasting Commitment and Continuous Effort' on Environment Day, and certainly the momentum this generated barely subsided during the year. Inevitably much talking took place, with numerous conferences, symposia and workshops, working groups and committees. These were necessary to pave the way for concerted action on the ground in the months and years ahead, with a promise being given to translate words into action.

Throughout the first half of the year, these efforts combined with another theme, that of the 'International Year of the Oceans', declared by UNESCO. The UAE became a signatory to the Ocean Charter, which is a declaration, albeit non-binding, of a commitment to the future of marine environments, part of a package of UNESCO initiatives coupled to the above.

The World Environment Day, promoted by United Nations Environment Programme (UNEP) fell on 5 June. Celebrating the theme 'For Life on Earth: Save Our Seas', municipalities and environmental groups came together to publicise and carry out a number of awareness and conservation activities during the week in which this day fell.

The UAE was represented at the UN Conference on Climate Change held in Kyoto, Japan, early in 1998, and plans to become a signatory to the Kyoto Protocol, an agreement whereby carbon dioxide emissions and other so-called 'greenhouse gases' are to be significantly reduced.

A major environmental award, the Sheikh Zayed prize, was announced during 1998. This will recognise, in separate categories, the efforts of both individuals and institutions in having made a substantial contribution to the promotion and safeguarding of the environment, through awareness and education, technological innovation or other means.

Sheikh Zayed was also himself the recipient of a prize, The Arab Cities Organisation's first 'Environment Patron' prize, in recognition of his efforts and contribution to afforestation and the establishment of nature reserves.

It was a matter of some regret that two significant oil spills should have occurred during the year and it was mainly by good fortune that little damage resulted. Both involved barges, one carrying 11,000 tonnes of fuel oil, the other 5,000 tonnes. But the cloud had a silver lining, with a much tougher line being adopted. These two spillages were caused by unseaworthy vessels being used for a purpose for which they were never intended. A subsequent Ministerial resolution banning the use of barges for transportation of oil effectively puts paid to any possible recurrence.

A third spill concerned a slick released from an unknown source, which threatened part of the UAE's East Coast in late June. This was promptly tackled by the Federal Environmental

Agency and Sharjah Municipality, upon notification by the Coast Guard, and thankfully thereby averted any possible adverse effect on marine life and the fishery industry in the area. Nonetheless, this served as a reminder of the need for constant vigilance.

In its now characteristic position of UAE front-runner, when it comes to environmental matters, the Abu Dhabi National Oil Company (ADNOC) launched, amongst a host of initiatives, a 'Cleaner Seas Campaign' involving clearance of lost fishtraps from the seabed, using inert decommissioned structures to regrow reefs and removing and neutralising hazardous debris and waste materials.

ADNOC, furthermore, and without any legal obligation to do so, re-evaluated its own Health, Safety and Environment standards and procedures. The oil company is its own watchdog, applying the same standards across its operating companies ('OPCOs'). Faith in it regulating its own activities is only facilitated by a deliberate corporate policy of openness and accountability.

Wildlife issues featured prominently during the course of the year. Pride of place should perhaps go to the Sharjah Endangered Animals Breeding Centre, opened officially in May, which houses impressive collections of Arabian mammals and reptiles. These are held to provide a supply of animals for reintroduction and restocking programmes in the UAE and, in future, for predators and wide-ranging ungulates in large cross-border reserves.

Wildlife research

The activities of Abu Dhabi's Environmental Research and Wildlife Development Agency (ERWDA) continued to captivate a wide audience. None more remarkable was the success of satellite-tracking of houbara by the National Avian Research Centre (NARC) part of ERWDA. This was the first time the species had been tracked successfully by satellite anywhere in the world. One bird, of several followed northwards on their spring migration from Abu Dhabi, reached Sinkiang province, China in the early summer, only to return to Abu Dhabi once more in the autumn. This was a round trip of some 7,000 kilometres.

NARC houses the Secretariat of the Houbara Specialist Group of the Species Survival Commission of the World Conservation Union (IUCN). Centralisation and collaboration amongst range states, thus far an unmitigated success, will facilitate the drafting of an action plan to conserve the species on a global level.

Satellite-tracking has, not surprisingly, really caught the imagination, and the resources devoted to wildlife studies have permitted turtles to be tagged in Arabian Gulf waters of the UAE. One of the turtles caught by the project team was found to have already been conventionally tagged in Oman. Early data from the transmitters has shown that the sea turtles have remained in the general Ras al-Khaimah area, and that they appear to be feeding on the vast seagrass beds known to be found off the coast. Next it is hoped it will be the dugong, of which, it is said, the UAE possesses the world's second largest population. Corporate sponsorship, by Shell in particular, has offset the expense of tracking and all that it entails. The results are eagerly awaited.

Not content to stand still, a number of private initiatives have been started or continued. The Environment and Wildlife Management Unit of the President's Private Department has secured a future for Arabian (mountain) and sand gazelles with large scale releases in a number of specially prepared areas of the Abu Dhabi desert. Trial releases of Arabian oryx are being contemplated; these would provide a measure of the efficacy of applied landuse management practices in environmentally sensitive common lands.



Other private initiatives, too many to list here, provide testimony to an ever increasing interest in restoring the delicate balance of man and nature in this arid but diverse land.

Particularly gratifying, has been an upsurge in corporate sponsorship of applied aspects of wildlife and environment research. The British Council provided support for fish research and Shell Markets Middle East for that on turtles as already stated, but many other companies provide behind the scenes logistical or other support.

The Al Ghar lakes, a managed wetland area only some 40 kilometres from Abu Dhabi city, was declared a nature reserve by Ruling Decree in the summer of 1998. This site, of international importance for waterfowl, is popular with flamingos, which it is hoped will breed successfully in future years. Al Ghar is, in fact, the first site in Arabia where the species has made a serious attempt to breed, since it bred in Kuwait in 1922.

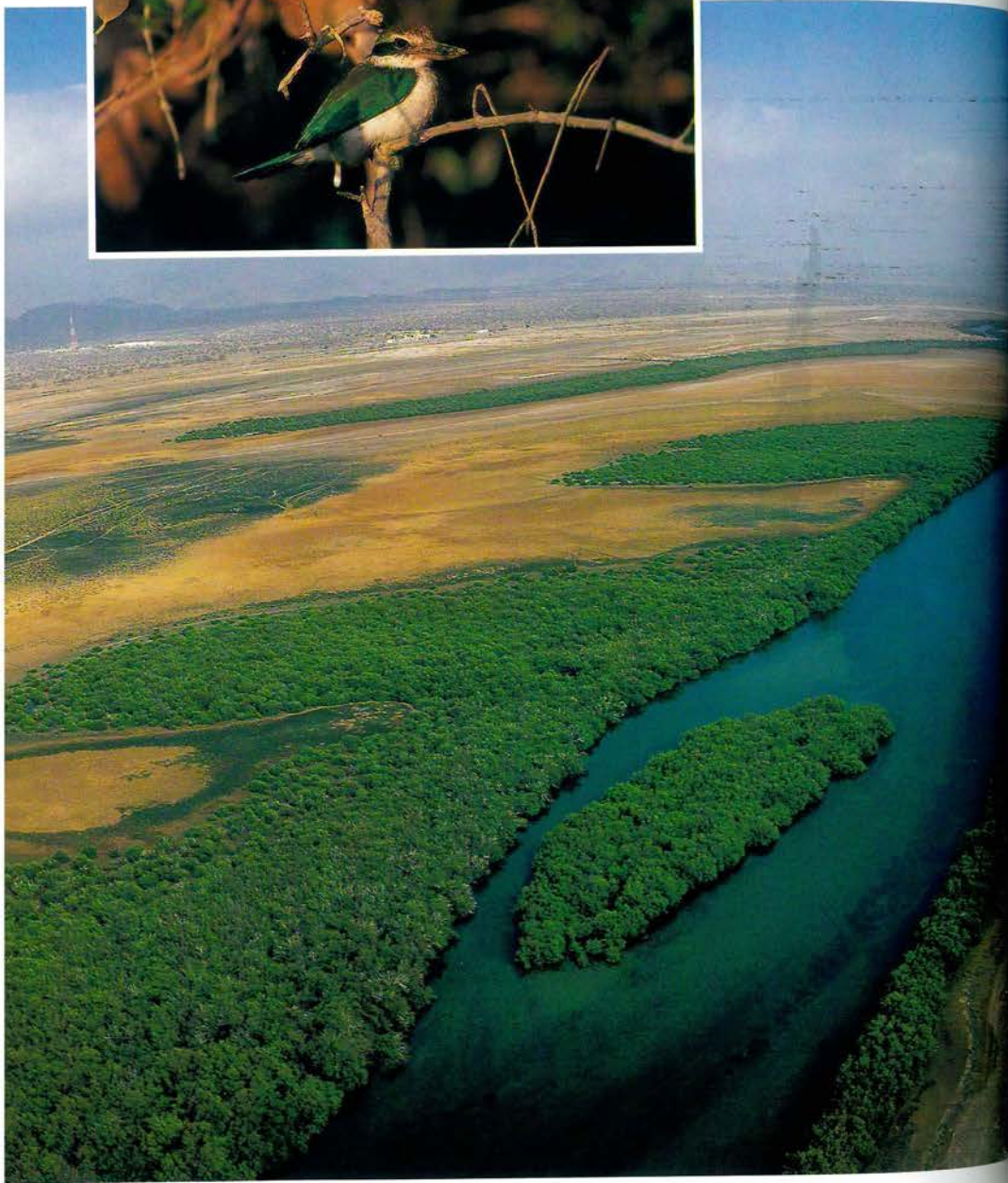
Possible new fish species found in UAE mountains

Surveys by amateur naturalists in the mountains of the UAE have identified what may be a species of fish previously unknown to science. The discovery was first made in autumn in 1997 in a wadi (valley) near the inland town of Hatta, in the Hajar Mountains, by the Dubai Natural History Group Chairman, Gary Feulner, and a colleague, Barbara Couldrey. Specimens of the fish have now been found over an area covering several square kilometres of the wadi system, which undergoes climatic variations ranging from extensive rain-fed flooding in the winter months to extreme heat and aridity in the summer, when water supplies are reduced to only a few visible pools.

The new fish has been identified as a member of the goby family. Most gobies are marine fish, although some have been reported in freshwater environments in coastal areas elsewhere in Arabia. They have never before been reported in wadis in Oman and the Emirates, however, and may possibly have survived from a period of much heavier rainfall many thousands of years ago.

Specimens of the fish have now been collected by a team from the Sharjah-based Breeding Centre for Arabian Wildlife, to permit further studies, while examples are to be sent away for a formal scientific description.





Khor Kalba mangrove lagoon and surrounding area, home to about 50 pairs of the kalbaensis subspecies of kingfisher. The Khor also supports a huge variety of bird, invertebrate and fish species.

It will be some time before it is determined whether the Hatta goby is a new species of fish, but its discovery shows, once again, that there is a substantial amount still to be learned about the wildlife of the Emirates, and also that amateur enthusiasts can play an important part in the study of the country.

Three other species of freshwater fish have been identified in wadis in the UAE's mountains, and are widely spread. Scientific studies have suggested, however, that some populations of these fishes, isolated from each other by the mountain ridges, may have evolved into different sub-species over thousands of years. Further research is planned.

New publication on the world's oceans

The Director of the World Wide Fund for Nature's (WWF) Endangered Seas Campaign, Michael Sutton, was invited to represent WWF at the launch at EXPO '98 of the new book entitled *Four-Fifths: The Ocean Planet* which was sponsored by the UAE (see Culture and Heritage).

In his speech to the assembly, Sutton commented that:

The Year of the Ocean presents an opportunity to expand and accelerate marine conservation efforts, to call governments and industry to account and to demand a change in policies and practices.

One of the key aspects of our work is to build public awareness about ocean issues that will be so important to the success of conservation efforts. That's why the release of Four-Fifths: The Ocean Planet is so important.

I believe that if the great Arab navigator Ahmed bin Majid were alive today, he would be very proud of the United Arab Emirates' sponsorship of this new book on the oceans. During this Year of the Ocean, we need everyone's help to guarantee that our children will inherit a living planet, abundant with fish and other marine life. The lives and livelihoods of millions of people around the world, in both the North and the South, are at stake.

Sutton also congratulated the UAE on being the only country in the world that had placed a blanket prohibition on bottom trawling.

Film-making

Several television film crews visited the UAE during the year to make documentary films with an environmental theme. The Joint Programme Production Institution of the GCC commissioned London-based McKinnon Films (of Treasures of the Gulf; Tides of War and Arabia Sand, Sea and Sky fame) to make three programmes concerned with the wildlife of the GCC countries. These, detailing conservation and research initiatives, will contain a component from many such activities presently underway in the UAE, from mangrove restoration to captive breeding of endangered species and state-of-the-art veterinary aspects of wildlife management.

Filming for a major documentary on the UAE's wildlife management was completed by a CNN film crew in early summer, shortly before an award-winning BBC Natural History Unit film crew arrived to shoot the private life of the unique crab plover at one

of their few breeding colonies. This, and other sequences, will be premiered in the new ten-part series 'Life of Birds' later this year. Presentation will be by Sir David Attenborough.

Weather

The vagaries of the UAE's weather, with records being set only to be broken soon afterwards, was again a feature in 1998. The annual winter rains started early and continued from the latter part of 1997 into the spring of 1998. Downpours of an unprecedented frequency were experienced and very soon after, that rare event, a desert bloom, was witnessed. The desert was, quite literally, given life. In many areas it was indeed hard to imagine that prior to the rains some landscapes had been little more than bare sand or rock or, indeed, that only two months later still, the flowers and grasses would be a golden hue, preserved without life, waving in the desiccating breeze.

The greenness of the winter and spring scene had not yet faded from our memories before the summer arrived, with record high temperatures. Ecologists studying the country's abundant wildlife noted an early breeding season for seabirds, a month ahead of the season in other recent years; mangroves too fruited early and coral gardens struggled to recover from the high temperatures which had killed off many reefs two years previously.

'Nations In Bloom' competition

Cities from the world's five major continents have registered for the 1998 'Nations in Bloom' competition which will be hosted by Al Ain. Interim judging will take place in the Spanish capital of Madrid, where the finalists in each category will be selected, while the finals will take place in February 1999 in Al Ain. Al Ain won a medal in the 1997 event while Abu Dhabi received an honourable mention.

Endorsed by the United Nations Environment Programme (UNEP), 'Nations In Bloom' is a non-profit making initiative of the International Federation of Parks and Recreation Administration, and is designed to promote the value of investment in the environment and also to show what can be achieved, often with limited resources. The criteria used by the judges include the enhancement of the landscape, heritage management, the use of environmentally sensitive practices, community involvement and planning for the future.





SIR BANI YAS

Sir Bani Yas, an island off the coast of Abu Dhabi, has been developed by Sheikh Zayed to provide a tranquil home for exotic and Arabian wildlife, as well as an experimental site for fruit cultivation and general afforestation programmes. Gently sloping plains fall away from cone-shaped, salt plug 'mountains' to mangrove-fringed shores and a glittering blue sea. Almost half of the land area is covered by plantations whose serried ranks of trees are a testimony to Sheikh Zayed's determination to turn Sir Bani Yas into a wildlife haven.

A large number of animals roam at will throughout the island. Most notably, the Arabian or mountain gazelle (*Gazella gazella cora*) known to local people as 'dhabi'. Other gazelles include the more numerous 'rheem' or sand gazelle (*Gazella subgutterosa marica*), dorcas gazelle (*Gazella dorcas*) and Grant's gazelle (*Gazella granti*), an East African species. Arabian oryx, which has been rescued as a viable species thanks to a number of captive breeding programmes, are held on Sir Bani Yas in special extended enclosures where they live and breed as if in the wild. Also to be found wandering the open countryside, or held within other large enclosures on this exotic island reserve are blackbuck, common eland, giraffe, beisa oryx, scimitar-horned oryx, addax, defassa waterbuck, fallow deer, axis deer, hog deer, barbery sheep and wild sheep or Asiatic mouflon.





One experiment in wildlife management that visitors are not encouraged to observe is a breeding pen for houbara (*Chlamydotis undulata*), members of the bustard family, the common prey of falcons. Complete seclusion is required if the bird is to breed successfully in the wild. Successful breeding has also taken place of African ostrich, rhea and emu. Other introduced birds that have effectively colonised the island paradise are Egyptian geese, grey and black francolin, see see, chukar partridge, African crowned crane and helmeted guineafowl.

The success of Sir Bani Yas as a nature reserve is further underlined by the number of wild bird species that have made it a temporary or permanent home. Sightings of over 170 species have been recorded. Among these a popular favourite is the greater flamingo, also known as the pink flamingo, which can be seen in shallow intertidal lagoons, protected by mangrove bushes, or at the artificial 'bird lake' where they gather in dense flocks of over a hundred individuals.

Sir Bani Yas has also proved to be a rich source of material for archaeologists, from Late Stone Age flints, to the remains of a pre-Islamic Christian religious complex, to artefacts from the Early and Late Islamic eras.



SPORTS AND LEISURE

The UAE government has placed great emphasis on the development of sporting activities, setting up sports, social and cultural clubs to enable the country's youth to sharpen their physical and mental skills. At the same time the highly-sophisticated sporting infrastructure that has been encouraged throughout the country has facilitated the staging of high-profile international sporting events, turning the UAE into the sporting capital of the Middle East.

FOOTBALL

Football remains the most popular sport in the UAE. Promotion of the sport through football clubs at schools and colleges, as well as at local, regional and national levels, has paid dividends in terms of raising the standard of the game in the country. Twenty-six football clubs, each with around 150 players, are currently affiliated with the UAE Football Association, which was established in 1971. (The UAE FA joined FIFA in 1972, followed by both the Arab Football and Asian Soccer Federations in 1974.)

Despite an extremely good performance in the XIth Asian Cup Football Championship in the 1996/1997 season, when they reached the final against Saudi Arabia, the UAE team had a disappointing 1997/1998 season and were particularly downhearted not to have qualified for the World Cup in France.

Nevertheless, football in the UAE was represented at the World Cup in the form of Ali Mohammed Bujseim, the UAE's top referee, who was given a tournament high rating of 9.5 by FIFA. Bujseim refereed three World Cup matches, including the semifinal between Brazil and the Netherlands.

World Cup qualifying match between UAE and Uzbekistan.



HORSES

Recent years have seen enormous growth in equestrian sport in the UAE. Whilst the foray into international competition is a recent phenomenon the role of the horse in UAE culture is as ancient as the desert sands. The association between man and his horse began in this region, not as a sport, but as an enduring partnership based upon survival in one of the world's toughest habitats.

With the arrival of prosperity, the Emirati's relationship with the horse made a crucial shift from survival to recreation. Throughout the 1970s and 1980s, racetracks and arenas sprang up across the UAE and the long-standing relationship moved into the realm of twentieth century competition. In 1985, the UAE joined the Federation Equestre Internationale (FEI). The UAE Equestrian and Racing Federation was formed in 1992, under the patronage of HE Sheikh Sultan bin Khalifa Al Nahyan. The Federation had a clear mission – to promote and sponsor equestrian sport in the UAE. The achievements are many. Since the Federation's inception, equestrian sport has become focused and highly successful. Racing has already taken its place on the world stage and showjumping and endurance riding are now poised in the wings of world excellence.

Horse-racing

Professional racing as it is now practised in the UAE did not begin until the season of 1991/1992. During the 1990s the sport enjoyed phenomenal growth throughout the UAE, and the country now boasts a number of prestige racing venues and hosts the world's richest horse race, the Dubai World Cup. (The 1998 winner of the Dubai World Cup was Silver Charm who pipped Dubai's Swain in a thrilling photo-finish.)

In the 1997/1998 season, 352 races took place in which 609 horses participated. Prize money was in the region of Dh 34.5 million. The Dubai World Cup has focused the eyes of the racing world upon Nad al-Sheba in Dubai, but horse-racing in the UAE is about far more than just Nad al-Sheba. In fact, there are five top-class racecourses in the UAE: Abu Dhabi Equestrian Club, Ghantoot Polo and Racing Club, Jebel Ali Racecourse, Nad al-Sheba and Sharjah Racing and Equestrian Club. All stage Thoroughbred and Arabian racing fixtures throughout the racing season.

The recognised turf authority in the UAE is the Emirates Racing Association, under whose guidance horse-racing in the Emirates has achieved full international status and the Dubai World Cup has been awarded the sport's coveted Group One status, which places the race on a level with the Derby, Oaks and Arc Classics.

From October to April the Emirates welcomes a constant stream of the world's top jockeys and horses. Some jockeys are based in the UAE for the duration of the season whilst others, such as Frankie Dettori, fly in for major races. Racing yards have sprung up across the country, and trainers from elsewhere in the Gulf, attracted by the country's superb facilities and high reputation, now base horses in the UAE.

The UAE racing industry is supported by world-class equine facilities and expertise. The Equine Hospital in Dubai is the envy of the worldwide racing fraternity. The quarantine centres are purpose-built, top grade facilities and the many officials and advisors that work tirelessly behind the scenes bring a wealth of international knowledge and experience to the Emirates.

The growth of racing in the Emirates has been mirrored by an upturn in sponsorship for races in both Dubai and Abu Dhabi. This development has also attracted interest from Racing Clubs around the world. As a result more and more horses from the UAE are being invited to run in major racing events abroad – a fact which highlights the high and constantly-improving quality of bloodstock in the UAE.

The 1997/1998 season saw two major developments in UAE racing. The opening of the racing side of Ghantoot Racing and Polo Club in Abu Dhabi gave the country yet another world class racing venue and the inauguration of the turf track at Dubai's Nad al-Sheba in March brought the total number of turf racetracks to three in the Emirates.

The UAE has also made its presence felt in equestrianism across the globe both through participation and promotion of the sport. For instance the Al Maktoum family of Dubai with over 1000 horses in training around the world, has made an enormous impact on the international racing scene. So too has the UAE Equestrian and Racing Federation, which has made every effort to raise and enhance the status of Pure-bred Arabian horses at international level.

In August this year, the Federation organised a six-race meeting at Newmarket, England, one of many such races it has organised in the last five years. These include The President of the UAE Jockey Club in Chantilly (French Derby), The President of the UAE International Race Day in Kempton Park, the German Derby for Pure-bred Arabian Horses, international races in Evry and Toulouse in France, as well as Amsterdam in the Netherlands, and other races in the Arab world in Jordan, Egypt and Morocco.

At home, the Emirates Arabian Horse Society (EAHS), presided over by Sheikh Mansour bin Zayed Al Nahyan, is making every effort to preserve the Pure-bred Arabian, a fundamental aspect of the country's heritage and culture.

Sheikh Zayed is registered as owning the biggest stock of Arabian horses in the world. The first Emiri Stable was established by Sheikh Zayed in 1969 with only 12 Arabian Pure-breds. Since then the Emiri Stables and those owned by Sheikh Zayed's sons have grown from strength to strength, leading to full membership of the World Arabian Horse Organisation (WAHO) in 1986.

Dubai World Cup '98 is presented to Bob Lewis, the owner of Silver Charm.



Endurance racing

The UAE is a pioneer in endurance rides as this form of equestrian competition is considered to be part of the country's traditional heritage. Pure-bred Arabian horses are the most suitable for these long-distance rides which require stamina and strength.

The highly-prestigious 160-kilometre World Endurance Championship, to be held in the Emirates on 10 December 1998, was awarded to the UAE following its impressive progress in endurance racing. As hosts the country will be allowed 12 entries while the other national federations can field up to six entries each. Held once every two years, the 1998 event will be one of the biggest yet, with 40 countries participating.

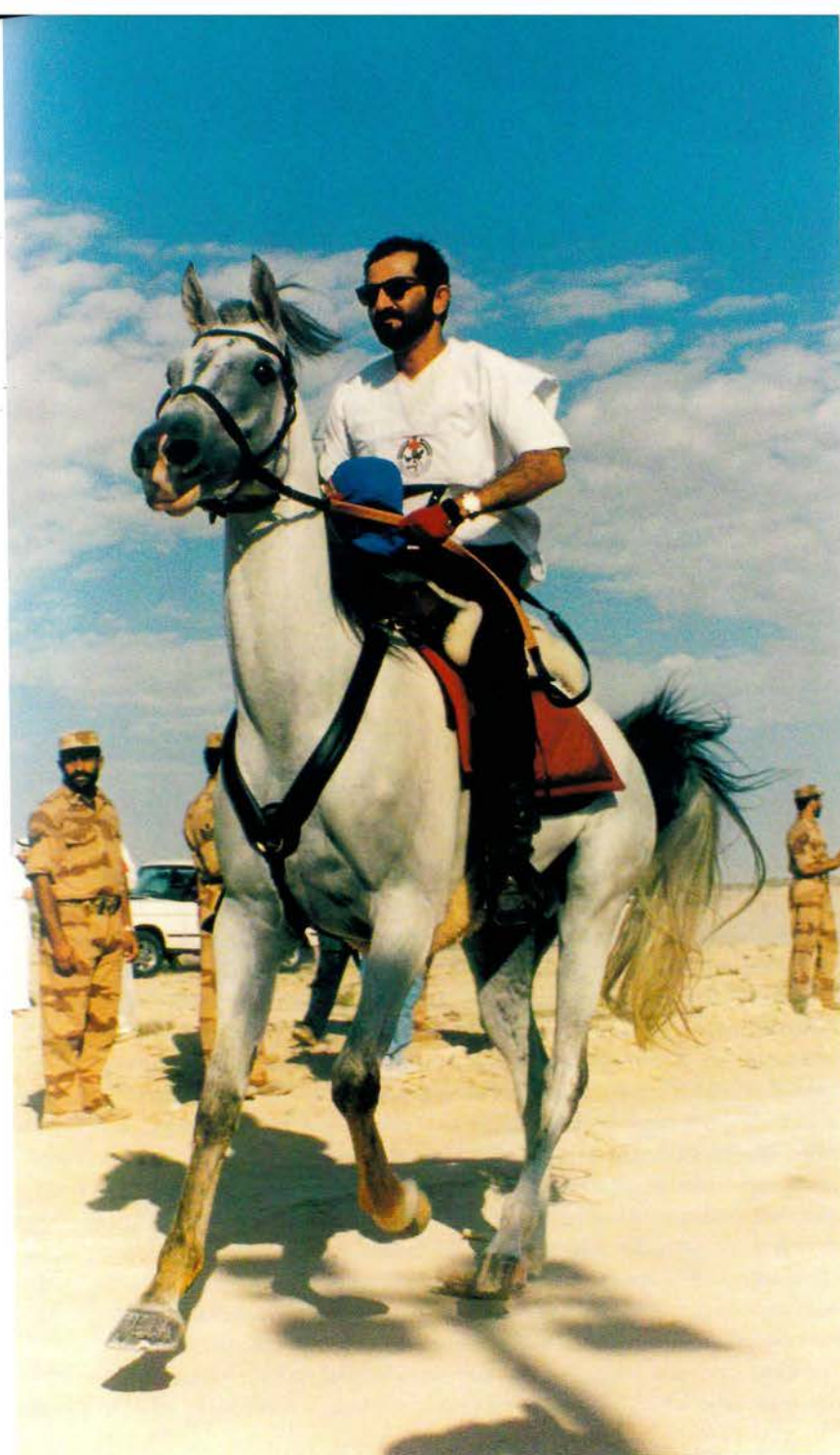
Dubai Crown Prince and UAE Defence Minister Sheikh Mohammed bin Rashid Al Maktoum will lead the UAE contingent in the championship, which is to be held in Asia for the first time. Sheikh Mohammed will start the championship as one of the favourites following his run of good form. In February '98, he won the international qualifier in the UAE, beating top riders, including the 1996 champion, Daniele Kanaway, and Qatar World Cup champion Tarek Taher of Saudi Arabia. Sheikh Mohammed also won a 200-kilometre, two-day ride in Ireland in May, demonstrating his great skill as an endurance rider.

Showjumping

As recently as 1980 there was no showjumping in the UAE. Following the arrival of various expatriate trainers, the sport was introduced to the Emirates in the early 1980s, and quickly gained support amongst the local community. Today, showjumping is an established sport throughout the UAE, and riders from the Emirates compete at international competitions across the world. Recent developments have been such that it is realistic to expect the UAE to send a showjumping team to the Sydney Olympics.

The UAE Equestrian and Racing Federation is showjumping's governing body. Affiliated to the Federation Equestre Internationale (FEI), the Federation has long term vision, and under the patronage of Sheikh Sultan Bin Khalifa Al Nahyan has put plans into motion to bring the level of showjumping in the UAE to international level. The Federation provides funding for every aspect of the sport, rider training, horse purchase, competition, travel expenses and technical expertise. The Federation has sent UAE riders to Europe to train with top showjumping trainers and has purchased proven competition horses from Europe for UAE riders to compete upon in national and international competition. To ensure that UAE competition complies with international standards, judges and technical experts have been brought in from Europe. With a view to the future, the Federation has implemented training programmes to train locally based judges and stewards to international standards. The Federation also provides practical support for competition organisers, which allows riders throughout the UAE to participate in a wide range of competitions at a variety of different venues.

In March 1997, the Federation appointed Major Brian Dunn as their technical consultant. Dunn was the man behind Saudi Arabia's successful bid to compete at the 1996 Olympics. His appointment to the UAE Federation was a clear indication that every effort would be made to send a team to the Olympics in the year 2000. Since Dunn's arrival in the UAE,





the sport has taken considerable steps towards the country's Olympic goal, with great emphasis being placed on the development of young riders within the sport.

Within the last year the Federation has held two qualifying competitions for the FEI Children's World Championships. One junior rider, Rashid Al Hussaini, qualified for the event and will travel to Japan to compete in the finals. Young riders, Rasha Hareb and Claire Al Redha, both veterans of previous Children's World Championships, have successfully represented the UAE abroad. In March 1998, Abu Dhabi hosted the Emirate's second FEI international showjumping event. To ensure that UAE riders have ample opportunity to compete against riders from other nations, the Federation has plans to work with Qatar and Oman to stage a series of international showjumping competitions that will attract riders from all over the Middle East.

Plans are already afoot to establish a prestige purpose-built equestrian facility for the Federation and to found a UAE-based stud to breed sport (jumping) horses. The development of such a facility will provide a training and competition base for riders from throughout the UAE, and will provide a central focus for the development of equestrian sport in the country.

CAMEL-RACING

Camel-racing, a traditional bedouin sport, is extremely popular in the Emirates. Originally staged in an informal setting, at weddings or special festivals, customised, camel race tracks have been built throughout the country, where race meetings are held in the winter months from October to April, culminating in the annual Camel Race Festival at Al Wathba which attracts entrants from all over the Arabian peninsula.

The races, covering a distance of between 8-10 kilometres, usually on a circular or oval track, are fiercely contested by camels from one to eight years of age, with separate categories of race being run for camels of different sexes and ages. Hundreds of camels compete in the major festivals, where prizes worth several million dirhams are in the offing.

As a result of the growth in popularity of camel-racing, greater attention has been paid to the challenges of breeding, including application of the latest technology. To this end the Al Ain-based Embryo Transfer Research Centre for Racing Camels was set up in 1989 under the patronage of Sheikh Khalifa bin Zayed Al Nahyan, Crown Prince of Abu Dhabi and Deputy Supreme Commander of the UAE Armed Forces. This centre has pioneered artificial insemination and embryo transfer in camels. Associated with the scientific research programme a well-equipped veterinary hospital has been built, which is engaged not only in treating sick camels, but also in advising owners on the best possible care for their animals.

Now, as with horse-racing, bloodlines and parentage are becoming of increasing importance as camel owners strive to improve the stamina and speed of their animals. With a top racing camel being worth over a million US dollars, camel breeding, buying and selling has become an important industry, and one in which those who once depended on the animal for transport and food are the most proficient.

Few other aspects of life in the UAE today give a better idea of the ways of the past. A festival atmosphere prevails at every race meeting. Large numbers of camels, their owners and families congregate at the race track, often camping in traditional style around the dunes. News and gossip is exchanged in the way that the people of the desert have done for centuries, even if mobile telephones are as much in evidence as the traditional Arabic coffee pot. Impromptu markets spring up around the tracks, where multi-colour camel-trappings and other paraphernalia are bought and sold.

The necessity to formulate rules and regulations for the sport has required the establishment of the Camel-Racing Federation, which is now responsible for guiding and controlling the sport in the Emirates. There are, for example, strict rules on the lower age and weight limit for jockeys, while, as with horse-racing, there are also rules on what a jockey may or may not do to encourage his mount to go faster. The Federation is also actively engaged in helping to promote the sport further afield. During 1997, for example, the first camel races were held in Germany, with the support of the UAE Camel-Racing Federation, while, in August 1998, support was given to the rapidly-growing Australian Camel-Racing Association.

GOLF

Less than three decades ago golfers were restricted to playing on oiled sand, putting on 'browns' rather than greens (a pleasure that can still be enjoyed at Dubai Country Club and at the Abu Dhabi Airport Golf Course). Today, proponents of the fastest growing sport in the UAE can take their pick of a number of world-class golf courses, complete with immaculate greens and lush fairways. Some of the courses are of such a high standard that they have been chosen to host major international golfing tournaments.

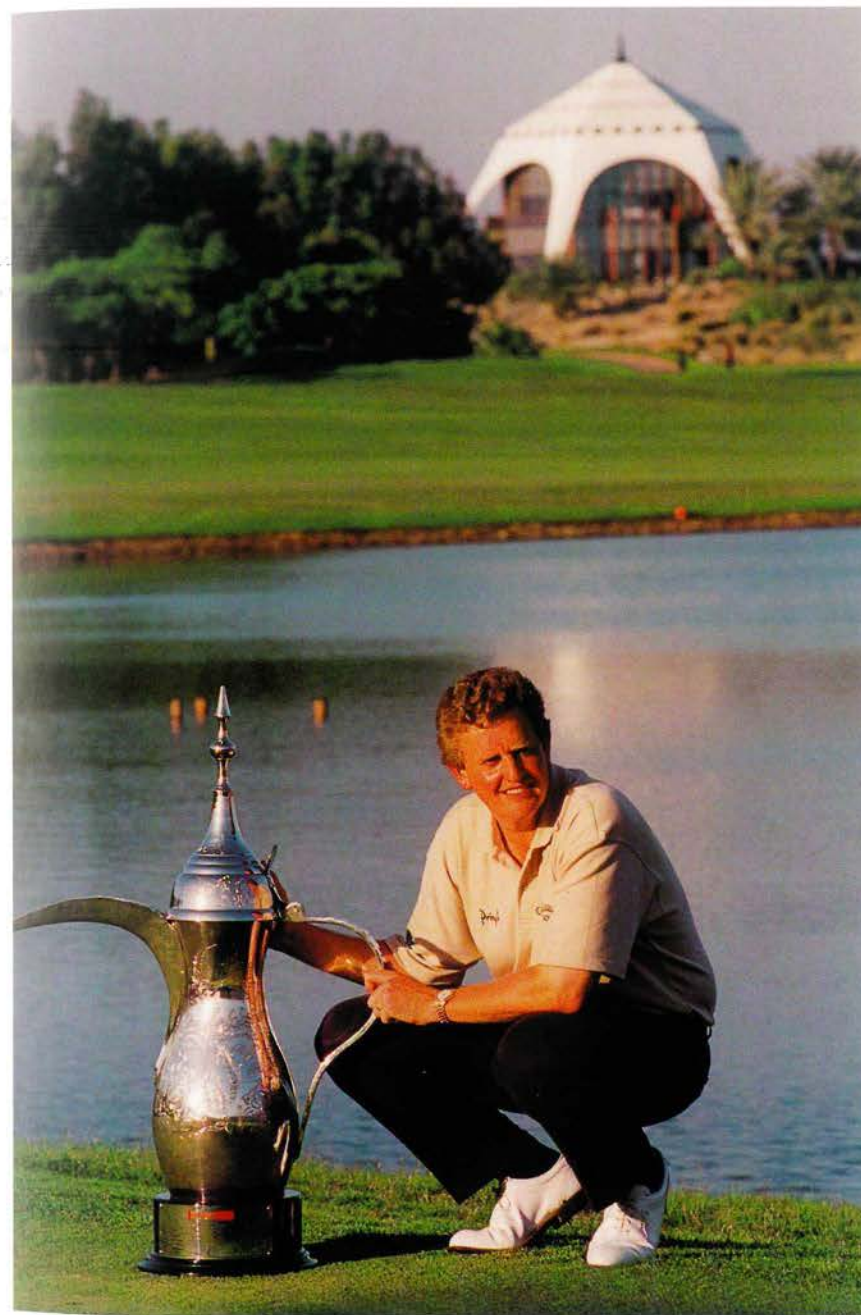
The bedouin tent design of the Emirates Golf Club clubhouse and buildings disguise plush air-conditioned interiors. In total, the grass course boasts 36 championship holes split between the Majlis and Wadi courses. The club has been the venue for the annual Dubai Desert Classic tournament, which is part of the ATP European tour, since the event's inception in 1999 will be the first year that the club has not hosted the tournament. Members of this prestigious club enjoy luxury changing rooms, cordon bleu cuisine and attentive service. A large swimming pool and patio area is often used as a site for concerts and shows.

A dual purpose golf and racing club, Dubai Golf & Racing Club (Nad al-Sheba) is an 18 hole links style golf course, which is fully floodlit. The last tee-time is 10 pm, which makes this course a popular choice for businessmen and women who wish to play after work. The back nine is built inside the perimeter of the racecourse, whilst the front nine, opened in 1996, runs alongside the 'home straight'. The clubhouse houses a golf shop, bar, coffee lounge and two restaurants – all with superb views of the track. On racing days the club is home to the heart of Dubai's racing crowd.

A sports and leisure complex that comprises a marina, championship golf course and fully equipped sports club, the clubhouse buildings of Dubai Creek Golf and Yacht Club are among some of the best known architectural features in Dubai. The Marina clubhouse is designed as a boat whilst the Golf Clubhouse is best known for its white 'dhow sails'. The beautifully-landscaped 18 hole grass course is open to all on a 'pay as you play' basis. The par 72 course winds between six man-made lakes, rolling, grass-covered dunes and towering date palms on the edge of the creek. The marina offers deep sea fishing, boat charters and a well-equipped gym.

Recently-constructed golf courses include Abu Dhabi's all grass 18 hole golf course in front of the Al-Raha beach on the Umm al-Nar highway. More than 100 hectares have been laid with greenery, including 6,000 date palms and 250,000 shrubs and flowering plants. The 18 hole links has seven lakes and the club house features two gyms, saunas, jacuzzi, squash courts, swimming pool, cafeteria and five pavilions. A smaller course has been built at Abu Dhabi Equestrian Club, whilst the aforementioned course at Abu Dhabi International Airport is a sand course.

Golf in the UAE is organised and promoted by the Emirates Golf Association (EGA), who are particularly proud of their junior development programme to encourage young golfers to excel in the sport. In 1998, ten year old Rashid Alabbar represented the UAE at the Third World Junior Golf Open held at Formby Golf Club, UK in July in parallel with the British Open. Alabbar qualified at the 1998 Lexus UAE national golf championship played at Dubai Creek Golf and Yacht Club.



Colin Montgomerie with the winning trophy at Dubai Desert Classic '98.

BOAT-RACING

Boat-racing, traditional and modern, is pursued with great vigour in the Emirates. In the traditional arena, long-boat races, although the boats are not quite as long as in the past, create an impressive picture as their tightly-packed crews labour at their oars, propelling their boats through calm inshore water under the appreciative gaze of spectators. Along with the rowing races, traditional sailing races are held at regular intervals during the period from October to April. As many as 55 majestic dhows assemble at the start line, evoking the customs and traditions of a bygone era. Great attention is paid to the preparation of the wooden boats and their massive rigs. Competition is intense and continuous effort has been made on new designs for lighter boats in order to gain extra speed.

Modern sailing races are also staged, both at a local and international level. From dinghies such as Lasers, Toppers and Kestrels to their faster and more exciting multi-hulled counterparts, the Hobie Cats, club racing is both competitive and great fun. Whilst larger sailing vessels are also catered for with a number of offshore races, the turbulent waters of the shallow Arabian Gulf, together with some strong tides, provide interesting challenges for yachtsmen.

Windsurfing also attracts those seeking a challenge, with the Abu Dhabi Boardwalkers Club holding weekly competitions throughout the summer.



Powerboat-racing

Powerboat-racing has an extremely strong following in the UAE, especially since the UAE's Victory Team has gained a worldwide reputation in the sport. UAE's Khalfan Harib and Ali Nasser became the first crew in the history of the sport to win the UIM Class Two World Offshore Championship for the second time in May 1998. World Champions in



UIM Class One World Championship.

1996, the Victory Team finished second in the third and last race of the series to guarantee the title. Driving Victory M13, team-mates Saeed Al Tayer and Mohamed Al Ghaith, who finished third in the 1997 championships, were not so lucky, as a broken transmission put paid to their chance of success.

Piloting 'Victory 7', Ali Nasser and Randy Scism won the Norwegian Grand Prix, the third round of the UIM Class One World Offshore Championship, held in July '98, while team-mates and former World Champions Saeed Al Tayer and Felix Serralles escaped serious injury after their boat exploded during the incident-filled race.

UAE's talented star Arif Al Zafeen made a strong impression at the Formula Two World Championship in Sweden in July, finishing a creditable ninth in his debut performance against some of the best Formula Two drivers in the world. Driving for the Emirates Formula Two Team, 26-year-old Zafeen is the reigning UAE Formula Two champion.

Powerboat races are held throughout the UAE, culminating in December each year in the Dubai Duty Free Grand Prix at the Dubai International Marine Club (DIMC) at Mina Seyahi, and this year in the Class One World Championships at the Abu Dhabi International Marine Club.



MOTOR SPORTS

Each year the UAE International Rally launches the Middle East series in March and the Dubai International Rally brings the regional series to a climax. In addition, a spectacular 2,000-kilometre desert challenge, entitled the Marlboro Desert Challenge, featuring cars and bikes, is staged in the UAE each November.

This year the Dubai Rally has a brand new format, with the familiar Jebel Ali stages making way for new sections as the rally moves inland to the Al-Dhaid and Madam areas. With a total distance of 738 kilometres, the route features 16 special stages accounting for 292 kilometres, just below the 300-kilometre maximum set for the championship by the FIA.

For the first time ever, the Dubai event will take place without a Group S category, which means the end of a championship era for highly specialised cross country type vehicles such as Land Rovers, Range Rovers, Toyota Landcruisers and Nissan Patrols.

Their final exclusion from the Middle East series was confirmed at the start of the year when new regulations were introduced by the FIA, motor sport's world governing body. The UAE was the last remaining Middle East championship battle ground for the Group S cars, which, for some time elsewhere in the region and overseas, had been restricted to cross country rallies and national events.

In order to give local drivers time to adjust to the new regulations, the Automobile and Touring Club for the UAE (ATCUAE) persuaded the FIA to give Group S a special reprieve for the UAE International Rally. Since then, ATCUAE, organisers of the Dubai and UAE International Rallies, has gone to great lengths to help UAE drivers make the transition from Group S to conventional rally cars.

Dominating regional competitions is UAE national Mohammed bin Sulayem, nine-times Middle East champion, who registered his forty-fourth international rally win in Lebanon in July 1998. Other UAE competitors in this rally were Sheikh Suhail bin Khalifa, partnered by Khalid Malik, and Salem bin Sheban, paired with W. Giles. Dubbed the 'Fastest Arab



Action from Dubai Desert Challenge.

on Wheels', Sulayem has won the Middle East titles in 1986, '87, '88, '89, '90, '91, '94, '96 and '97. With Dubliner Ronan Morgan as co-driver, bin Sulayem has enjoyed a highly successful nine-year partnership and the duo are set to clinch a tenth Middle-East title and continue their dominance of the region.

DIVING AND SNORKELLING

Today the same UAE waters that attracted the pearl divers of old continue to draw large numbers of residents and tourists beneath their surface – but for very different reasons; sport diving is extremely

popular in the UAE and there are numerous

clubs and dive centres throughout the country, many specialising in PADI courses.

Abu Dhabi provides the best diving on the west coast of the UAE. Visibility is generally far better than elsewhere in the Gulf, and the waters offer divers a selection of pristine, hard coral gardens, man-made reefs and intriguing wrecks. Within a 30-minute boatride from the marina divers can enjoy immaculate well established coral gardens that are home to a wealth of tropical reef fish and high numbers of large groupers. Green turtles are regularly seen, both on the surface and underwater. Several wrecks, well-colonised by soft corals, lie in deeper waters slightly further out to sea. The wrecks are home to profligate fish life, a large variety of nudibranchs that make popular subjects for photographers, and divers can expect to see schooling barracuda. For those who wish to venture slightly further afield, there are yet more wrecks and some interesting reefs around the off-shore islands. Water temperatures vary from 19–34 degrees centigrade. Visibility is best in the winter months.

On the Indian Ocean eastern coastline there are many interesting locations for diving and snorkeling, and the relatively clear water provides good visibility. Off the coast of Khor Fakkan more than ten dive sites are located within a few minutes boatride from the shore. Typically, some of the best sites are submerged rocks that have been colonised by soft corals. Fish



life is abundant, and turtles are commonly sighted. During winter months grey reef sharks are often seen. The diving gets steadily more demanding and more varied as the coast runs northwards. From the ancient town of Dibba it is possible to reach a wealth of deeper divesites within half an hour's boatride. Mountains that plunge directly into the ocean are covered in soft corals to depths of 40 metres, and a cave system offers exciting diving for experienced and suitably qualified divers. Nurse and leopard sharks are regularly seen, and whale shark sightings are not unknown during the cooler months. Water temperatures vary from 21–34 degrees centigrade.

TENNIS

Assisted by the splendid facilities on offer throughout the country, tennis is a much favoured sport in the UAE, both at amateur and professional level. The Dubai Tennis Open attracts superb players from among the top 50 in the world rank. Other tennis tournaments include the Dubai Aviation Cup Men's Singles Open Tennis Tournament, held under the auspices of the UAE Tennis Association.



Boris Becker in action at Dubai Open Tennis Tournament '98.

BOWLING

The UAE Bowling Federation organises competitive bowling in the UAE, a sport that has become even more popular in recent years as bigger and better bowling alleys are opened across the country.

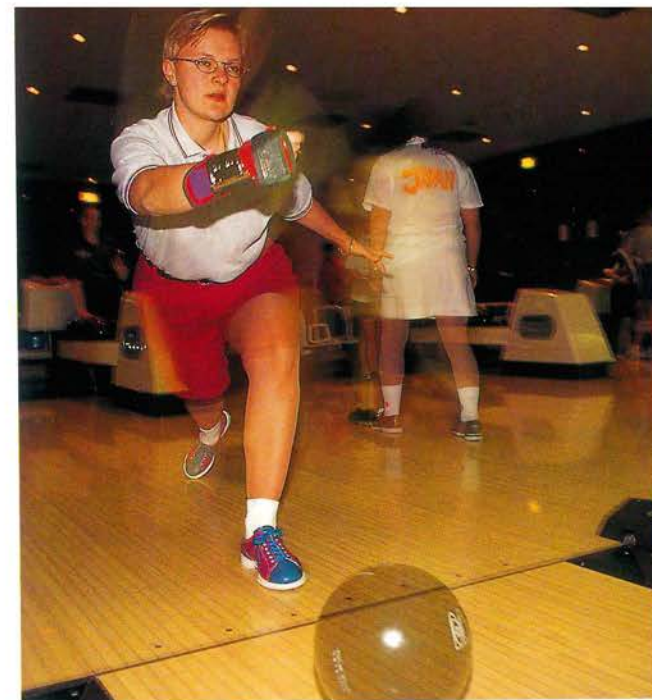
The month-long second Annual UAE International Bowling Championship, billed as the 'dress rehearsal for the world championship', took place at the Abu Dhabi Tourist Club and Al-Jazira Sports Club in February. With prize money of \$270,000, the championship attracted some of the top names in international bowling. Participating on behalf

of the UAE was former World Champion (1988) Mohammed Khalifa Al Qubaisi. The second Dubai Open International Bowling Tournament took place in June at the Thunder Bowl bowling centre in Dubai. Organised by the UAE bowling federation, total prize money was Dh 200,000 of which the winner received Dh 50,000. Bowlers from GCC member states, along with other Arab, Asian and European countries, took part in the tournament.

SPORTS FOR THE DISABLED

The second World Semi-Olympic Championship for the disabled was held in August 1998 in Birmingham, UK. Over 1,500 disabled contestants from 60 countries took part in the eight-day event. The 37-member UAE delegation, headed by Ahmad Mohammed Hassan, won two gold, two silver and five bronze medals. The victorious contestants were Ahmed Saif Zaal (400 metre gold and 800 metre bronze), Khamees Masoud (gold and bronze in discus), Naseeb Sibait (400 metre silver and 200 metre bronze). Ali Gamber, Mohammad Humaid Al Muhairy and Ahmed Al Shamsi added three bronze medals in the 400 metre and discus throw competitions.

The UAE also had another very successful year at the World Wheelchair Games held at Stoke Mandeville in the UK, coming second behind Tunisia and beating the US into third place. The six-member team, trained by Al-Tiqah Club for the Handicapped in Sharjah, returned home with two gold, two silver and three bronze medals. They also added another two gold and two silver medals at the Nottingham International Championships. There, the gold medallists, Ali Gamber Ali (winner of the 200 metres) and Ahmed Saif Zaal (winner of the 800 metres), became World Champions in their respective categories.





Asian Cities Chess Championship, Dubai.

CHESS

The UAE has a very active Chess Federation that organises domestic tournaments as well as the participation of the UAE team in international championships. In 1997, Talib Moosa was the first player from the UAE to win the Credit Suisse Masters Chess Championship in Cannes, France.

Numerous tournaments, for youths and adults, men and women, are held in the UAE, including the President's Cup which

was staged in 1998 in Abu Dhabi on 6 August, and the Dubai International Masters, also held in August, at the Dubai World Trade Centre. Alia Hussain, who won the UAE ladies chess festival at the Dubai Masters, is the No. 1 women's chess player in the UAE.

OTHER SPORTS

The UAE's relatively large expatriate population has meant that cricket has become a firm favourite in the country. Official recognition was given to the sport when Sheikh Faisal set up the Abu Dhabi Cricket Club. Sharjah Cricket Club hosts domestic and international matches at its cricket ground, including the Akai-Singer Championship Trophy. The introduction of floodlights at the Sharjah ground has made the game not only visually appealing but more viable commercially. Having entered the ICC Trophy in Kuala Lumpur as defending champions, the UAE team were disappointed that they failed to qualify for the World Cup in 1999.

Rugby is another popular sport with the expatriate community who take part in the Arabian Gulf league and World Cup rugby seven-a-side and fifteens. The Abu Dhabi Rugby Club, Dubai Exiles RFC and Al Ain RFC all field teams.



First international cricket match played under floodlights in Sharjah Cricket Stadium, between India and England.

Shooting, pigeon racing, ice skating and ice hockey at Abu Dhabi's Hili Fun City and two rinks in Dubai, formula one indoor go-karting, badminton, polo and sand surfing are among the many other sports, competitive and non-competitive, that take place in the UAE.



EXHIBITIONS AND EVENTS

Exhibitions, trade shows, conferences and festivals contribute significantly to the economy of the UAE, the major shows staged throughout the country attracting exhibitors and visitors from all over the world. International exhibition organisers and exhibitors identify the UAE both as a major commercial centre in which they can make inroads into the region's markets and as a convenient location offering excellent facilities that attract potential customers from much further afield. A direct consequence of the developing market has been a mushrooming of exhibition centres throughout the Emirates.

The increasing importance of Abu Dhabi as an exhibition site is evidenced by the fact that the Abu Dhabi International Exhibitions Centre (ADIEC) is staging over 40 exhibitions between 1998 and the year 2000. The centre, a division of the Abu Dhabi Chamber of Commerce and Industry (ADCCI), completed a new Dh 72 million facility in 1997, which will enable it to hold bigger and better shows, providing further impetus to the development of professional international exhibitions in the capital. It is intended that the new centre will act as a catalyst in the development of the capital's commercial market and will help to broaden the scope of commercial activity in Abu Dhabi.

Facilities comprise a main exhibition hall, foyer and registration areas, executive offices covering 850 square metres, a VIP lounge, a subdivisible 1,600 square metre conference area for up to 900 delegates, storage and service areas, outdoor exhibition areas and extensive parking. ADIEC's radical new concept is designed to ensure that the new facility will be able to accommodate every size of event, and meet every organiser's requirement.

Sixteen thousand square metres of flexible interior space are available to organisers, with all the services expected from a modern international exhibition centre. The main exhibition hall will be divisible into four smaller halls by means of movable partitions. Each smaller hall, all of which will be separately accessible, will be served by a two-storey central core, housing a kitchen, a restaurant and the exhibition organisers' offices. This concept will mean that as many as five events could conceivably take place at ADIEC at the same time.

Even before the new facility was completed, some of the most important international exhibitions in the Gulf were being held in Abu Dhabi, including IDEX, the International Defence Exhibition; ADIPEC, the Abu Dhabi International Petroleum Exhibition and Conference; ADIF, the Abu Dhabi International Fair; MIDCOM, the International Telecommunications Exhibition; and THE BUILDING FORUM, which covers building and construction, decoration, overseas property and city infrastructure development. Important events held in 1998 include TRIDEX, the major international defence exhibition, and INTERNET WORLD MIDDLE EAST, the latest member of the world's leading series of information technology global events.

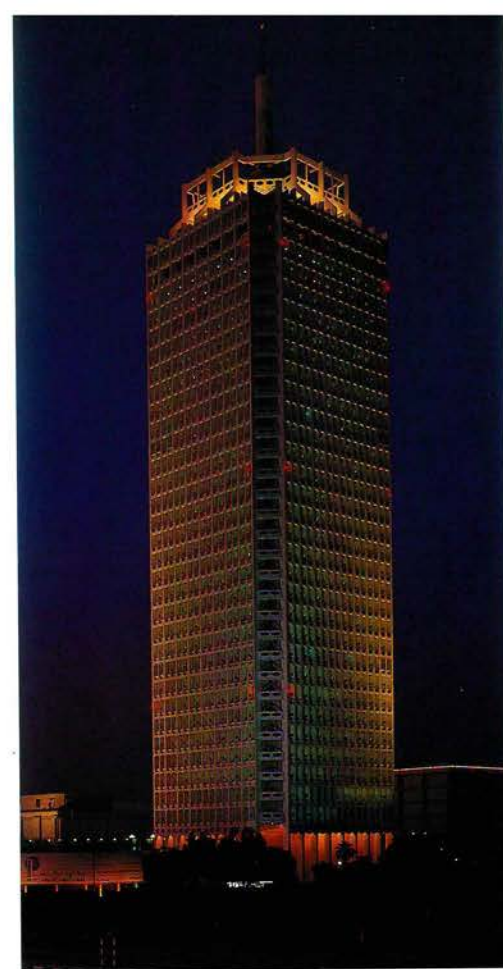
The General Exhibition Corporation (GEXCO), established in August 1998, will play a significant role in promoting the exhibition industry in Abu Dhabi. A programme is being prepared for the Corporation, which will devise the general policy for local and international exhibitions and also be responsible for the organisation and sponsorship of international events held both inside and outside the Emirate of Abu Dhabi.

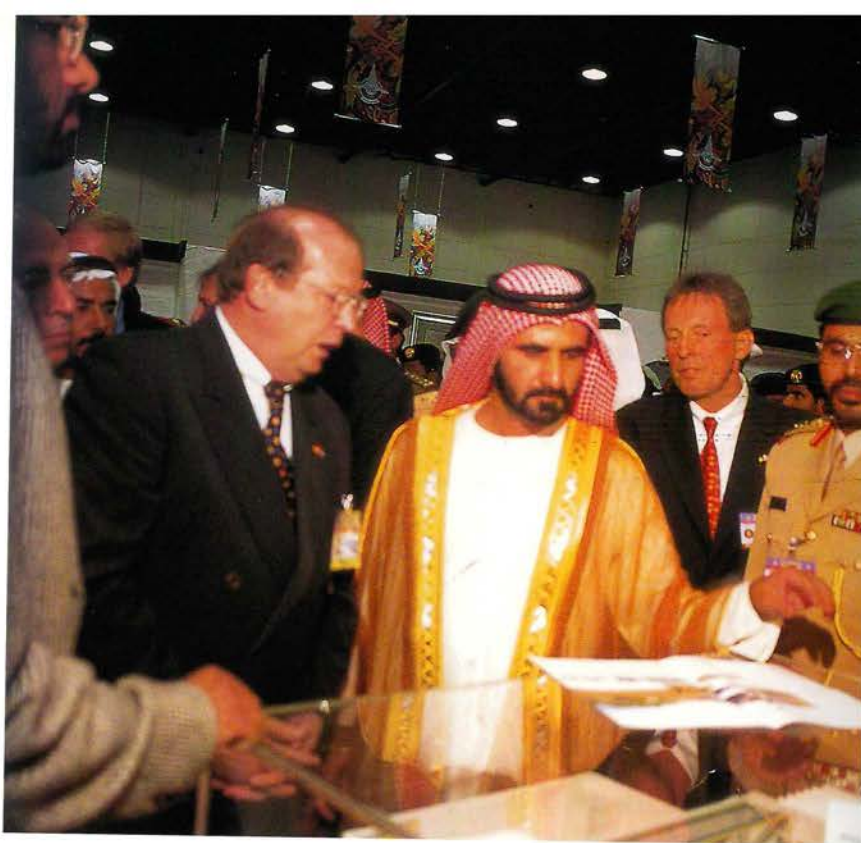
Since its inauguration in 1979, Dubai World Trade Centre has played a vital role in stimulating regional and international trade throughout the UAE. The exhibition business had relatively humble beginnings in Hall 1, which was converted in 1995 to the prestigious Dubai International Congress Centre. To meet the overwhelming demand from exhibitors and exhibition organisers, Hall 1 (previously Hall 2) was added in 1982, Hall 2 in 1985, Hall 3 in 1993, Hall 4 in 1995 and Halls 5, 6 & 7 in 1996. These expansions allowed the Dubai World Trade Centre to remain at the forefront of the Middle East exhibition industry. The seven exhibition halls comprise a total exhibition area of 33,000 square metres of gross exhibition space.

The exhibitions staged in these halls serve the growing needs of the regional business community. International exhibitions featuring health, oil and gas, food, information technology, construction, interior design, furniture and textiles, fashion, electricity, consumer electronics, cable & satellite, education and motor vehicles are staged annually. These exhibitions are complemented by programmes of company presentations, conferences and seminars which address issues related to each show.

Sharjah Expo, owned and run by the Sharjah Chamber of Commerce and Industry (SCCI), has become an effective promotion and marketing window for the region.

Fujairah Exhibition Centre was inaugurated on 10 December 1996. Fujairah Chamber of Commerce, Industry and Agriculture hope that the new centre will open up opportunities for both producers and customers.





TRIDEX

An international exhibition specialising in defence communications, logistics, training and electronic warfare was held for the first time under the banner Triple International Defence Exhibition (TRIDEX) in Abu Dhabi between 15–19 March 1998. The new venture complements the biennial IDEX exhibition held in alternate years. With TRIDEX (which will also be held every two years) in place, the UAE has gained a reputation as the premier venue in the world to showcase the defence industry, facilitate arms purchase transactions and combine salient aspects of theory and practice in the industry. The main objective of TRIDEX is to display and promote technologies and equipment most suitable for the global market, especially for GCC countries, the Middle East and Asia. The wide participation in TRIDEX '98, including the presence of British Defence Secretary George Robertson, was a measure of the confidence and trust placed by the international defence community in the UAE. Over 220 companies and government organisations were represented, with some \$180 million worth of business concluded.

This exhibition provides a good opportunity for the military leadership in the country to acquaint itself with the latest technology and gain scientific experience through direct contact with the military leaders of other countries.

TRIDEX is accompanied by TRICON, a conference that serves as a catalyst to promote dialogue between manufacturers, suppliers and buyers.



Demonstrating mine clearance equipment at TRIDEX '98.

TRICON

Inaugurating TRICON '98, Minister of Higher Education and Scientific Research Sheikh Nahyan bin Mubarak Al Nahyan said that maintaining a peaceful world is the prime focus of all civilised countries, irrespective of their political and social views. He added that the issues of future defence requirements are particularly timely in view of the primary concern of maintaining world peace.

TRICON was concerned with the application of new technologies to defence requirements, particularly in the field of telecommunications, geographic locators, guidance systems, medical care, training and simulation, reflecting the commitment of the UAE Armed Forces to maintaining a technological edge. Particularly valuable was the opportunity to exchange information and ideas. The event also provided an opportunity for a large number of scientists and researchers to meet decision-makers.

The Organising Committee for International Exhibitions (CODEX) is preparing to hold the International Defence Exhibition and Conference, (IDEX '99) from 14 to 18 March 1999 at the Abu Dhabi International Exhibitions Centre.

Dubai Air Show

The IDEX and TRIDEX series of exhibitions are complemented by the biannual Dubai Air Show, one of the most important air shows in the world. The 1997 show was one of the most successful ever, prompting General Sheikh Mohammed bin Rashid Al Maktoum, Crown Prince of Dubai and UAE Minister of Defence, to comment that the Dubai Air Show and the Abu Dhabi International Defence Exhibition had become showcases for the success of the UAE's economic policies, self-reliance and infrastructure. The four-day aerospace exhibition, attracted over 27,000 visitors – up from the previous year's 25,000 – from 90 countries.

The Dubai Government has given the go-ahead for an ambitious plan for a permanent exhibition ground for the Dubai Air Show. The plan, initiated with support and approval of Sheikh Mohammed bin Rashid, is aimed at ensuring the Dubai Air Show ground is in a class of its own, surpassing facilities at main show rivals Le Bourget, Farnborough and Singapore. The site will be ready by September '99 and the show's organisers are confident it will receive a tremendous response from the international aviation and aerospace industry.

Designed by Dar al-Handasah in conjunction with the Dubai Department of Civil Aviation Engineering and the Dubai Airwing, the plan covers a huge site 3 kilometres south east of the previous air show ground. It will be accessed from the Airport Road via a fly-over to avoid traffic congestion and some 3,000 on-site parking spaces have been built into the plan.

Taking advantage of a natural ground gradient, the site will be tiered, sloping 8.5 metres from its entrance to the static park and affording better apron and air views from around the ground. The static display area has been increased from 650 m x 132 m in 1997 to 750 m x 140 m. Two purpose-built exhibition halls will provide 25,000 square metres of exhibition space as opposed to a previous 18,500 square metres.

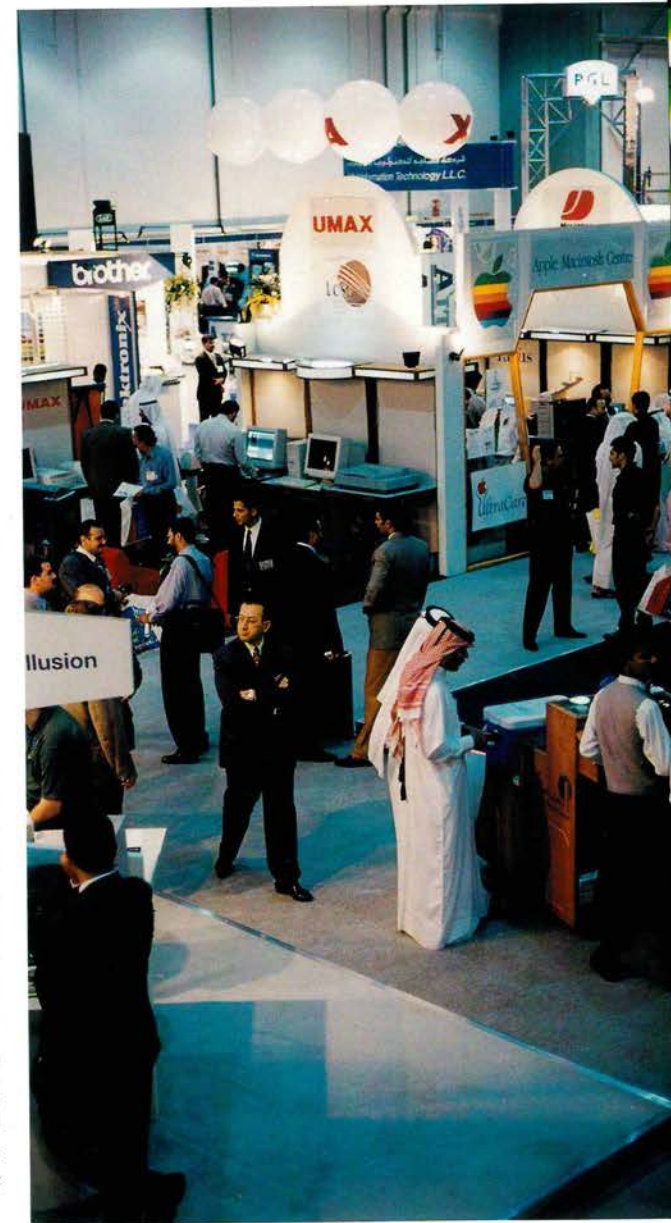
The out-door exhibition area has been strategically placed and a new 18-metre high control tower is to be built. The site will also boast a dedicated area for a container park, contractors offices and aircraft maintenance, as well as a full-fledged clinic.

GITEX

The Gulf Information Technology Exhibition (GITEX), held at the Dubai World Trade Centre (DWTC), is a major information technology event on the Middle East calendar. The popularity of GITEX is attributed to its ability to cater to the niche Middle East information technology market. The IT sector in the Middle East region is estimated to be worth more than \$1.5 billion with an annual growth of between 12 and 15 per cent, said to be twice that of the international average. As the privatisation process grows, this is expected to increase even further.

ADIPEC

The Abu Dhabi International Petroleum Exhibition and Conference (ADIPEC) provides an unequalled forum for leading manufacturers and suppliers to become acquainted with the region's significant oil development requirements and for the UAE to study the latest oil and gas technologies. The exhibition is organised by the Abu Dhabi Chamber of Commerce and Industry, ADNOC, and the International Society of Petroleum Engineers.



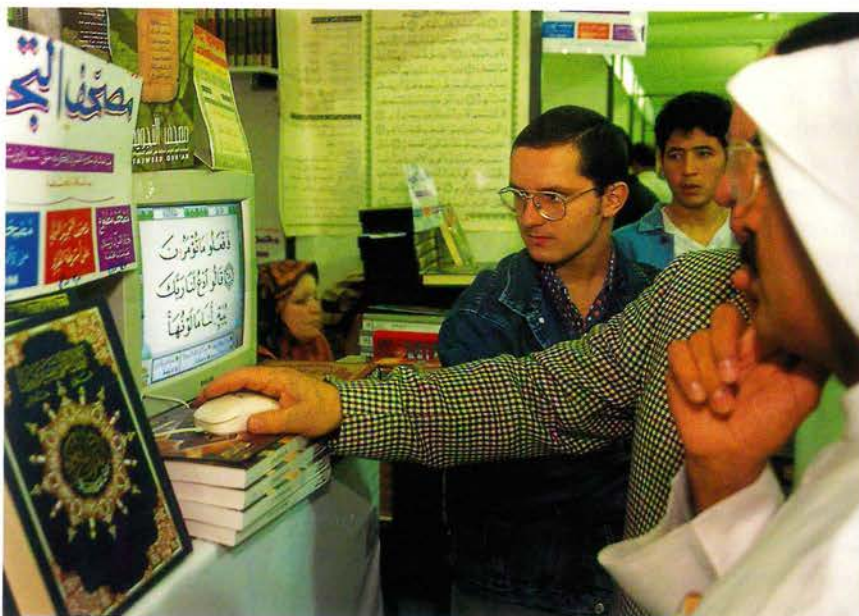
MPGC

The annual Middle East Petroleum and Gas Conference is held in Abu Dhabi in September of each year. In 1998, leading UAE and multinational petroleum companies gathered to discuss the growing need for the development of information technology in the oil and gas sector. The conference, entitled 'Information Technology for Oil & Gas Middle East '98', addressed the strategic use of information technology for global competitive advantage. Focusing firmly on business issues, this event attracted interest from international companies, as well as top executives across the Middle East.

Senior representatives from regional IT front runners, like the Abu Dhabi National Oil Company (ADNOC) and Saudi Arabia's Arabian American Oil Company (ARAMCO), examined the challenges facing the Middle East petroleum industry in the race to cut costs, enhance efficiency, and, most importantly, increase bottom line profits in companies faced with cuts in oil quotas. Leading players in the oil and gas market, including Mobil, Total, British Petroleum (BP) and AMOCO, also presented case studies and success stories. A private exhibition, open to companies and suppliers, ran alongside the conference.

Sharjah International Book Fair

Organised by the Culture and Information Department in Sharjah, the sixteenth International Book Fair was held in Sharjah from 5–16 November '97. A total of 635 Arab and foreign publishing houses from 37 countries exhibited more than 85,000 titles at the Book Fair. Activities on the sidelines included seminars and lectures dealing with culture and heritage, drama and cinema, as well as poetry and music.



According to Minister of Information and Culture Sheikh Abdullah bin Zayed Al Nahyan Sharjah's annual Book Fair has become the foundation for the country's cultural progress. Describing it as 'the best book fair held on UAE soil' and pointing out its excellent organisation and the participation of famous publishing houses, he went on to urge the public to benefit from the occasion by acquiring the latest titles on display. He also called upon the organisers of book fairs in the Arab world in general to co-ordinate efforts to lessen the problems faced by publishers.

The above is a small sample of the numerous exhibitions, trade shows and conferences held throughout the Emirates.

Dubai Shopping Festival

One UAE event, neither an exhibition nor a conference, which has received considerable attention is the Dubai Shopping Festival, held for the third successive year from 19 March to 18 April 1998.

Over 2,300 shops in Dubai must offer significant discounts during the Festival and the event is a magnet for local bargain hunters and international travellers, attracting close on 2 million visitors. In addition to the low prices on a wide range of goods, valuable prizes are given away during the month-long festival. Cultural events, children's activities, sporting occasions and spectacular fireworks display add to the carnival atmosphere and go hand in hand with value shopping to provide a high level of entertainment for all ages.

Dubai also staged a Summer Surprises festival in July. Innovative events included a series of ice surprises, such as igloo building, as well as culture surprises, with participants experiencing a taste of local cuisine at traditional food festivals hosted at many of Dubai's shopping malls.

EXHIBITIONS AND EVENTS 1998-9

1998 ABU DHABI

MOROCCAN EXPO

5-11 October
New ADIEC Halls
Moroccan Products and Services
Organised by ADIEX
ADIPEC '98
11-14 October
New ADIEC Halls
Abu Dhabi International Petroleum Exhibition and Conference
Organised by ADIEX
ARAB INDUSTRIAL EXHIBITION
25-28 October
New ADIEC Halls
Specialized Industrial Exhibition
Organised by GulfWave Exhibition
Arab Jewellery & Watch 98
29 October-1 November
ADIEC Hall (C)
International Exhibition of Jewellery, Gemstones, Watches, Precious Gifts & Gold Smith Machinery.
Organised by Emirates Exhibition Services

SYRIAN EXPO

4-13 November
New ADIEC Halls
Exhibition of Products and Services From Syria
Organised by ADIEX
FIGEC

16-18 November
New ADIEC Halls (to be confirmed)
4th Forum on Investment in Gulf Economic Communities.
Organised by ADIEX
ARABIAN SHOPPING EXHIBITION

Al Ain
27 November-6 December
Public Exhibition
Organised by Hader Establishment
EGYPTIAN EXPO

5-12 December
New ADIEC Halls (a1)
Exhibition of Products and Services from Egypt.
Organised by ADIEX
Abu Dhabi International Motor Show '98

7-11 December
New ADIEC Halls
An International Exhibition for motor car, vehicles, passenger car, special purpose car, commercial cars, 4 wheels drive, spare parts, garage equipment and car bi-fi.
Organised by Emirates Exhibition Services

1999 Abu Dhabi

Internet World Middle East '99
22-24 February
IDEX
14-18 March

Exhibition Organisers in Abu Dhabi

ADIEX-Abu Dhabi International Exhibitions
PO Box 5546, Abu Dhabi, UAE. Tel: +971 2 446900, Fax: +971 2 446135, E-mail: adieclmm@emirates.net.ae
CODEX - The Military Committee for International Defence Exhibitions and Conferences
PO Box 27426, Abu Dhabi, UAE. Tel: +971 2 324744, Fax: +971 2 347299, E-mail: codex@emirates.net.ae
EMASCO Exhibitions
PO Box 592, Abu Dhabi, UAE. Tel: +971 2 674040, Fax: +971 2 674343
Emirates Exhibition Services
PO Box 43697, Abu Dhabi, UAE. Tel: +971 2 795444, Fax: +971 2 795136, E-Mail: wmsaleh@emirates.net.ae
Infocenter International
Dubai World Trade Center, Level 16. PO Box 9392, Dubai, UAE. Tel: +971 4 310551 Fax: +971 4 310096
International Exhibition Establishment
PO Box 744, Abu Dhabi, UAE. Tel: +971 2 329658, Fax: +971 2 351394
Trade Fairs and Conferences Ltd
PO Box 825, Dubai, UAE. Tel: +971 4 525050, Fax: +971 4 522365, E-Mail: tcfairs@emirates.net.ae
Gulf Waves I.L.C.
PO Box 26322, Abu Dhabi, UAE. Tel: +971 2 774100, Fax: +971 2 777920
Economic Studies & Training Department
P.O.Box. 662, Abu Dhabi Tel. +971 2 3066 451 Fax. +971 2 341 210 E-Mail: studies@adcci.gov.ae

1998 - DUBAI

ARAB HUNTING

Sept 29-Oct 2
Hunting equipment and accessories.
Mediac Communications and Promotion.
Tel: 971 4 692 004
Fax: 971 4 691 296

INDEX

October 7-11
The 8th Middle East Intl. Furniture and Interior Design Exhibition.
Channels.

Tel: 971 4 824 737
Fax: 971 4 825 757

ARABSHOP

October 7-11
The 5th International Shopfitting, Retail and Display Exhibition.
Channels.
Tel: 971 4 824 737
Fax: 971 4 825 757

BIG 5

October 18-22
Water, Building, Refrigeration & Air Conditioning, Glass and Metal, Cleaning & Maintenance and Construction.
International Conferences and Exhibitions
Tel: 44 1442 878 222
Fax: 44 1442 879 998
Dubai Tel: 971 4 460 503
Dubai Fax: 971 4 460 498

GITEX

Oct 29-Nov 2
For suppliers and users of computers, communications, electronic office systems and services.
Dubai World Trade Centre (L.L.C.)
Tel: 9714 321 000
Fax: 9714 318 034

COMPUTER SHOPPER

Oct 29-Nov 2
Retail showcase for Gitex specialising in home computer equipment.
Dubai World Trade Centre (L.L.C.)
Tel: 9714 321 000
Fax: 9714 318 034

ITALY AND THE GULF

November 8-11
Products and services made in Italy.
I.I.R. Exhibitions.
Tel: 9714 365 161
Fax: 9714 364 006

GULF BEAUTY

November 8-11
The 3rd Intl. Trade Fair for Perfumes, Cosmetics and Body Care.
Channels.

Tel: 971 4 824 737
Fax: 971 4 825 757

GULF INTERTRAFFIC

November 8-11
Design/maintenance of traffic and transport infrastructures.
Dubai Rai
Tel: 971 4 319 444
Fax: 971 4 319 011

INTERNATIONAL AUTUMN TRADE FAIR

November 8-12
General Trade Fair.
Al Fajer Information and Services.
Tel: 971 4 371 591
Fax: 971 4 344 013

Mother and Child Exhibition & Seminar MC'98

November 14-17
Index Exhibitions & Conference Organization
Tel: 9714 651 585
Fax: 9714 733 777

UAE NATIONAL INDUSTRIES

November 17-19
Goods and services from the UAE.
Channels.
Tel: 971 4 824 737
Fax: 971 4 825 757

WOMAN

November 18-22
The 8th international exhibition for woman consumers.
Channels.

Tel: 971 4 824 737
Fax: 971 4 825 757

GULF HOME

November 18-22
The consumer exhibition.
Channels.

Tel: 971 4 824 737
Fax: 971 4 825 757

AUTOSTOP

November 22-25
Auto parts and accessories, maintenance equipment and petrol station forecourt equipment.
I.I.R. Exhibitions.

Tel: 971 4 365 161
Fax: 971 4 364 006

TEKNO SEVEN

November 22-25
Industrial machinery and plastics technology.
Al Fajer Information and Services

Tel: 971 4 371 591
Fax: 971 4 344 013

STORAGE AND HANDLING

November 23-25
Products and services.
Dubai Rai

Tel: 971 4 362 900
Fax: 971 4 362 988

CHEMTEX INCORPORATING.

CORROSION MIDDLE EAST
Nov 29-Dec 01

Chemicals, petrochemicals and chemical process technology.
International Expo-Consults(M.E.)

Tel: 971 4 354 960
Fax: 971 4 354 964

GASTECH

Nov 29-Dec 1
The 18th international conference and exhibition for the LNG, LPG and natural gas industries.
Turret Rai

Tel: 44 (0) 1895 45 45 45
Fax: 44 (0) 1895 45 46 47

ARAB HORSE

December 8-11
Products and services available to the Equestrian industry.
Al Fajer Information and Services

Tel: 971 4 371 591
Fax: 971 4 344 013

ARABHEALTH

December 8-11
International hospital, medical equipment and services.
I.I.R. Exhibitions

Tel: 971 4 365 161
Fax: 971 4 364 006

PLANET YOUTH

December 7-13
Exhibition of products, services and technology for age groups 12-20 years.
Fairs and Exhibitions

Tel: 971 4 822 855
Fax: 971 4 822 866

The Final Ceremony of Dubai World Holy Quran Awards

December 28/98-January 6/99
Dubai World Holy Quran Recitation Awards '98

Tel: 971 4 716 000
Fax: 971 4 733 777

1999**7th GULF FOOD, HOTEL AND EQUIPMENT**

Jan 31-Feb 3
Food and beverage, hotel and catering equipment.
Dubai World Trade Centre LLC

Tel: 971 4 308 6043
Fax: 971 4 318 034

Jaguars International Launch of the New X200

February 2
Arabian Adventures

Tel: 971 4 303 4470
Fax: 971 4 314 696

PRINTING AND PACKING TECHNOLOGY

February 7-10
Goods and services in the printing and packaging industries

Fairs and Exhibitions.
Tel: 00 44 171 935 8537 Fax: 00 44 171 935 8161

Dubai Tel: 971 4 822 855 Fax: 971 4 822 866

SIGNS AND BANNERS

February 8-10
Products and services for the sign and banner industry.

International Expo-Consults(M.E.)
Tel: 971 4 354 960

Fax: 971 4 354 964

INTERSEC

February 8-10
The International Commercial Security, Fire and Safety Exhibition

Channels
Tel: 971 4 824 737

Fax: 971 4 825 757

ARABLAB

February 15-18
Laboratory technology instrumentation equipment and services.

Intl Conferences and Exhibitions
Tel: 44 1442 878 222

Fax: 879 998
Dubai Tel: 971 4 460 503

Dubai Fax: 971 4 460 498

MIDDLE EAST TELECOMS

March 2-4
Communications, Internet, Satellite and Mobile Telecommunications.

Dubai World Trade Centre LLC
Tel: 971 4 321 000

Fax: 971 4 318 034

The 8th UAE Dental Conference & Arab Dental Exhibition (AEEDC'99)

March 6-8
Index Exhibition Organization

Tel: 971 4 651 585
Fax: 971 4 651 581

THE MIDDLE EAST TOY FAIR

March 9-11
Incorporating *CHILDREN'S FESTIVAL
Toys, Games, Hobbies, Books, Gifts, Stationery, Apparel, Licensing.

Infocenter International
Tel: 971 4 310 551

Fax: 971 4 310 096

INTERNATIONAL SPRING TRADE FAIR

Mar 14-18

General Trade Fair:
Al Fajer Information and Service

Tel: 971 4 371 591
Fax: 971 4 344 013

GERMANY AND THE GULF

March 22-25
German products and services.

I.I.R. Exhibitions
Tel: 971 4 365 161

Fax: 971 4 364 006

MIDDLE EAST INTERNATIONAL LEISURE EXPO (M.I.L.E.)

March 23-25
Gulf Stadla, *Sportex, Theme Parks and Fun Centre, Garden Furniture and Camping, Saunas, Spas and Pools and The Golf Village

International Expo-Consults(M.E.)
Tel: 971 4 354 960

Fax: 971 4 354 964

INTERNATIONAL JEWELLERY

April 6-10
Jewellery, luxury gifts, watches, gems.

Dubai World Trade Centre LLC
Tel: 971 4 321 000

Fax: 971 4 318 034

PROPERTY & INVESTMENT 99

April 13-16
Investment, Property and Insurance

Channels
Tel: 971 4 824 737

Fax: 971 4 825 757

GULF EDUCATION AND TRAINING

April 13-16
International student recruitment show.

Intl Conferences and Exhibitions
Tel: 44 1442 878 222

Fax: 879 998
Dubai Tel: 971 4 460 503

Dubai Fax: 971 4 460 498

AGRI BUSINESS

April 20-23
Goods and services.

Mediac Communications
Tel: 971 4 692 004

Fax: 971 4 691 296

MOTEXHA/CHILDEXPO

April 21-24
Gift items, fashion, textiles, clothing, footwear, children's clothes and toys.

I.I.R. Exhibitions
Tel: 971 4 365 161

Fax: 971 4 364 006

KITCHENS AND BATHROOMS

April 25-28
The 2nd International Trade Fair for the Kitchens and Bathrooms industry.
Channels

Tel: 971 4 824 737
Fax: 971 4 825 757

MIDDLE EAST INTERNATIONAL BOAT SHOW

April 25-28
Watersports equipment and boats.
Dubai Rai

Tel: 971 4 362 900
Fax: 971 4 362 988

ARABIAN TRAVEL MARKET

May 4-7
The inbound and outbound travel and tourism for the Middle East region.

Reed Exhibitions
Tel: 44 181 910 7958

Fax: 44 181 910 7733

BOOK, PEN AND PAPER

May 18-20
Books, publishing, stationery, music and musical instruments.

Channels
Tel: 971 4 824 737

Fax: 971 4 825 757

The 5th Computer Telephony Exhibition

Insight Computer Consultancy
Tel: 971 4 697 668

Fax: 971 4 697 718

INTERNATIONAL PREMIUM EXHIBITION

September 21-24
Corporate gifts, premiums, incentives & stationery.

Channels
Tel: 971 4 824 737

Fax: 971 4 825 757

MOTEXHA

September 22-25
Trade fair for fashion, textiles, clothing and footwear.

I.I.R. Exhibitions
Tel: 971 4 365 161

Fax: 971 4 364 006

AMBIENTE ARABIA

September 22-25
Gift items and luxury goods in the Arab world.

I.I.R. Exhibitions
Tel: 971 4 365 161

Fax: 971 4 364 006

THE LEATHER SHOW

September 22-25
Leather fashionwear, accessories and gift items.

I.I.R. Exhibitions
Tel: 971 4 365 161

Fax: 971 4 364 006

GULF TEX-STYLES

September 22-25
Equipment, raw materials, processes, accessories for textile/clothing manufacturing.

I.I.R. Exhibitions
Tel: 971 4 365 161

Fax: 971 4 364 006

ARAB HUNTING

Sept 29-Oct 1
Hunting equipment and accessories.

Mediac Communications and Promotion.
Tel: 971 4 692 004

Fax: 971 4 691 296

ARAB DENTAL 99

Sept 29-Oct 1
An Exhibition of products, technology and services related to the dental industry

I.I.R. Exhibitions
Tel: 971 4 365 161

Fax: 971 4 364 006

INDEX

October 6-10
The 9th Middle East Intl. Furniture and Interior Design Exhibition.

Channels.
Tel: 971 4 824 737

Fax: 971 4 825 757

ARABSHOP

October 6-10
The 6th International Shopfitting, Retail and Display Exhibition.

Channels.
Tel: 971 4 824 737

Fax: 971 4 825 757

BIG 5

October 17-21
Water, Building, Refrigeration & Air Conditioning, Glass and Metal, Cleaning & Maintenance and Construction.

International Conferences and Exhibitions
Tel: 44 1442 878 222

Fax: 44 1442 879 998

Dubai Tel: 971 4 460 503

Dubai Fax: 971 4 460 498

ARAB OIL AND GAS

October 16-19
The showpiece for the oil and gas industry in the Arab World.

International Conferences and Exhibitions
Tel: 44 1442 878 222

Fax: 44 1442 879 998

Dubai Tel: 971 4 460 503

Dubai Fax: 971 4 460 498

FIATA World Congress Dubai 1999

National Committee of Freight Forwarders
Tel: 971 4 825 860

Fax: 971 4 651 581

GITEX

Oct 30-Nov 2
For suppliers and users of computers, communications, electronic office systems and services.

Dubai World Trade Centre (L.L.C.)
Tel: 971 4 321 000

Fax: 971 4 318 034

COMPUTER SHOPPER

Oct 30-Nov 2
Retail showcase for Gitex specialising in home computer equipment.

Dubai World Trade Centre (L.L.C.)
Tel: 971 4 321 000

Fax: 971 4 318 034

GULF BEAUTY

November 7-10
The 4th Intl. Trade Fair for Perfumes, Cosmetics and Body Care.

Channels
Tel: 971 4 824 737

Fax: 971 4 825 757

M.E. INTERNATIONAL MOTOR SHOW

November 10-14
Exhibition for the motor trade in the Arabian Gulf.

Dubai World Trade Centre
Tel: 971 4 321 000

Fax: 971 4 318 034

CHEMTEX

November 15-17
Chemicals, petrochemicals and chemical process technology.

International Expo-Consults(M.E.)
Tel: 971 4 354 960

Fax: 971 4 354 964

TEKNO 7

November 16-19
Arab Industrial Machinery

Al Fajer Information and Services
Tel: 971 4 371 591

Fax: 971 4 344 013

Dubai Pharmaceutical and Technologies Conference & Exhibition (Duphat '99)

Index Exhibition Organization
Tel: 971 4 651 585

Fax: 971 4 651 581

INTERNATIONAL AUTUMN TRADE FAIR

November 21-25
General Trade Fair.

Al Fajer Information and Services
Tel: 971 4 371 591

Fax: 971 4 344 013

GULF HOME

November 24-28
The consumer exhibition for the home.

Channels
Tel: 971 4 824 737

Fax: 971 4 825 757

November 24-28

WOMAN

Exhibition for women consumers.
Channels

Tel: 971 4 824 737
Fax: 971 4 825 757

November 23-26

Photographic, audio-visual and imaging industries.
Dubai Rai

Tel: 971 4 362 900
Fax: 971 4 362 988

PLANET YOUTH

November 23-26
Exhibition of products, services and technology for age groups 12-20 yrs

Fairs & Exhibitions
Tel: 44 171 935 8537

Fax: 44 171 935 8161

UAE AT A GLANCE

United Arab Emirates	a federation comprising the seven emirates of Abu Dhabi,
(UAE):	Dubai, Sharjah, Ras al-Khaimah, Ajman, Umm al-Qaiwain, & Fujairah.
Location:	The UAE lies between latitudes 22°–26.5° North and longitudes 51°–56.5° East. Bordered to the north by the Arabian Gulf, to the east by the Gulf of Oman and Sultanate of Oman, to the south by Sultanate of Oman and Saudi Arabia, and to the west by Qatar and Saudi Arabia.
President:	HH Sheikh Zayed bin Sultan Al Nahyan (Ruler of Abu Dhabi)
Vice President and	
Prime Minister:	HH Sheikh Maktoum bin Rashid Al Maktoum (Ruler of Dubai)
National Day:	2 December (commemorating the establishment of the United Arab Emirates on 2 December 1971)
Sheikh Zayed's	
Accession Day:	6 August (commemorating Sheikh Zayed's accession as Ruler of Abu Dhabi)
Global alliances:	The UAE is an integral part of the Arab nation and a member of the Arab Gulf Co-operation Council, the Arab League, the Organisation of Islamic Conference, the Non-Aligned Movement and the United Nations, and has diplomatic relations with 143 countries.
Federal Capital:	Abu Dhabi
Area:	83,600 sq. km (including islands)
Climate:	Between November and March the UAE experiences warm sunny days with an average temperature of 26°C and cool nights with an average temperature of 15°C. High temperatures (up to 50°) and high levels of humidity are the norm between June and August.
Average rainfall:	42 millimetres, except in the mountains of Ras al-Khaimah and Fujairah where it is close to 150 millimetres per year
Population:	2.8 million (1998 estimate)
Religion:	Islam
Language:	The official language is Arabic
Time:	4 hours ahead of G.M.T.

Currency:	Arab Emirates Dirham (= Dh or AED)
Exchange Rate:	Dh 3.671 = US \$1.00
UAE proven oil reserves:	98 billion barrels
UAE share in world	
oil reserves:	10%
GDP (1997):	Dh 176.3 billion
Oil sector contribution	
(1997):	Dh 53.5 billion
Non-oil sector	
contribution (1997):	Dh 122.75 billion
No. of workers (1997):	1.13 million
Per capita income	
(1997):	Dh 67,200
Hotels:	323
Hotel revenues (1997):	Dh 2.98 billion
Banks:	48 banks with 300 branches
Airports:	6
Ports:	15
TV stations:	4
Radio stations:	4
Newspapers:	9
Schools:	1068 (government and private)
Universities:	6
Higher Colleges	
of Technology:	9
Hospitals:	54
Health centres:	115
Life expectancy:	76 years
Perinatal mortality rate:	2 per 100,000
Literacy:	75%
Electrical capacity:	7,466 megawatts
Total desalinated	
water production:	1.9 billion cubic metres per day
Per capita water	
consumption:	400 litres per day
Internet subscribers:	55,000
Mobile phone	
subscribers:	380,000
Paved highways:	3326 kilometres
No. of productive farms:	23,930
No. of fishing vessels:	6,341

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